

FREE
GREEN PAGES + TWO DISCS

The best-selling Acorn magazine in the world

ACORN USER

Essential for all users of 32-bit RISC OS computers

THE
NEW
A7000+

Plus reviews of:

• New Acorn

• Publish Art

• TBA FS

• Wakefield Show

• Drifter

July 1997

Issue 183

£3.95



GREEN PAGES + TWO DISCS

9 770263 745109

07



OVATION

Pro

THE PROFESSIONAL
DESKTOP PUBLISHER



NEW!

Colour Supplement



This fully integrated extension allows professional designers to produce output for high quality commercial litho printing. Both full colour and spot colour separations are supported, with options to view separations on-screen and to control PostScript screen angles, frequency etc.

Also included is a powerful image processing facility which allows brightness, contrast and gamma levels of images to be adjusted using slider controls. Custom contrast settings may be defined on the colour map, and images can be converted to duotones.

Ovation Pro Colour Supplement costs £57.58

Note that all registered users who have bought Ovation Pro before May 1st 1997 will be sent the colour supplement free-of-charge.

For more information on Ovation Pro, including up-to-date news, specifications, latest applets etc., why not visit our web site at:
<http://www.beebug.com>

New features!!!

- Colour palette
- Definable multi-row button bar
- Style palette
- Instant highlight of misspelt words

Package includes:

- 300 page reference guide
- Step-by-step tutorial
- Quick reference card
- 50 high-quality fonts
- Selection of clipart
- Desktop Thesaurus
- Bubble help

Ovation Pro combines fast, responsive word processing with state-of-the-art page layout features to deliver the ultimate desktop publishing system. Packed with a staggering range of features – many available on the Acorn platform for the first time – Ovation Pro opens up a whole new world of document design. At last you can flow text inside and outside irregular frames or rotate them to any angle – in both cases the text remaining fully editable. Even with such a vast range of features Ovation Pro is still easy-to-use, thanks to its superb user interface.

- Definable Button Bar
- Irregular frames with Bézier curves
- Rotated text frames with editable text
- Multi-step Undo & Redo
- Drag & Drop for text and objects
- Drag & Drop between documents
- Named colours & definable colour charts
- Automatic drop caps
- Justification with letter spacing
- Multi-column frames
- Frames with skew & rounded corners
- Vertical justification
- Frame borders and drop shadows
- Straight and curved line drawing
- Auto flow around irregular graphics
- Easy-to-use master pages
- Context sensitive info palette
- Reads Ovation, RTE, DDF, Artworks files
- Macro handling and script language

Ovation Pro is fully expandable using extension modules called Applets. Over 30 of these are supplied, including applets to automatically insert ligatures, generate fractions and expand abbreviations.

Ovation Pro costs £193.88

Upgrade from Ovation £116.33

Upgrade from another desktop publisher or word processor* £139.83

*includes Style, Publisher, EasiWriter, TechWriter, PenDown+ and Advance. Site licences and upgrades are available – please phone for details. To upgrade you must return your original program disc with payment (discs will be returned).

BEEBUG

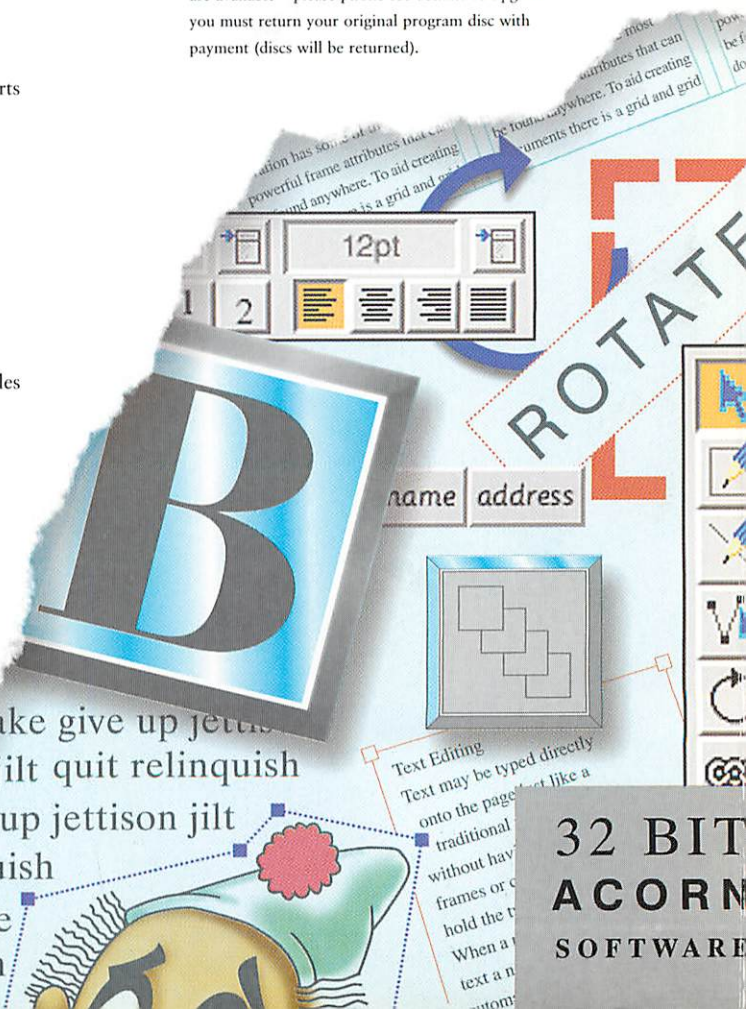
Beebug Ltd. 117 Hatfield Road,
St. Albans, Herts. AL1 4JS

Tel: +44 (0) 1727 840303

Fax: +44 (0) 1727 860263

Email: sales@beebug.co.uk

All prices include VAT, but please add £3.50 carriage. Airmail will be charged at cost to overseas customers.



32 BIT
ACORN
SOFTWARE

contents

July 1997

• regulars

- 4 News**
All the latest happenings in the Acorn world
- 13 Graphics**
TopModel 2; Map of the month and new art
- 15 Comms**
Frobnicate is not a rude word; GIFs and geeks
- 16 Public Domain**
Special feature on demos and why they're a good thing
- 19 Business**
Made-to-measure or off-the-peg software?

Managing Editor Pam Turnbull
Editor Steve Turnbull
Assistant Editor Karen Peach
Art Editor Stuart Cripps
Sub Editor Alan McLachlan

Contributors

Dave Acton, Ian Burley, Mike Buckingham, Mike Cook, David Dade, Jonathan Gutteridge, Allan Keeley, Jack Kreindler, Dave Lawrence, Rob Miller, Steve Mumford, Graham Nelson, Geoff Preston, Jill Regan, Greg Scott, Mark Taylor,

Mike Tomkinson, Paul Wheatley

Group Advertisement Manager
Elaine Prescott

Account Manager Ian Antrobus
Account Executive Carl Jackson
Ad Production Barbara Newall

Ad Typesetting Eddie Burke
Marketing Manager Steve Tagger
Marketing Assistant Jane Comber
Database Development Manager
Victoria Quinn-Harkin

Production Manager Alan Capper
Circulation Director David Wren
Distribution COMAG (01895) 444055
Subscriptions & Back Issues

Database Direct 0151-357 1275

Email: database@dbdirect.demon.co.uk

Managing Director Ian Bloomfield
Cover Stuart Cripps

Member of the Audit Bureau of Circulation.

Acorn User is an independent publication and Acorn is not responsible for any of the articles in this issue or for any of the opinions expressed.



Published by IDG Media Ltd,
Media House, Adlington Park, Macclesfield SK10 4NP
e-mail: aueditor@idg.co.uk
<http://www.idg.co.uk/acornuser/>
Tel: (01625) 878888 Fax: (01625) 850652
Printed by Apple Web Offset, Warrington

13 issue subscription rate: £39.99 (UK),
£53.99 (EU), £68.99 (World)

©1997 IDG Media Ltd.

No material may be reproduced in whole or in part without written permission. While every care is taken, the publishers cannot be held legally responsible for any errors in articles, listings or advertisements and the views of contributors do not necessarily reflect the views of the publishers

21 Portables
Looking at Psion and RTF importing

23 Cover disc
Fantasy Formula One and the latest printer drivers



53 Game Show
Previewing Shuggy arcade and Arya adventure

72 Back issues
Your chance to buy any copies of AU that you've missed

72 Free ads
Our free service to help you buy and sell Acorn goodies

80 Letters
Air your views on the pages of AU

82 The Regan Files
AU talks to Trish Hornsey of Inclusive Technology

• hands on

62 Rambles through Acorn Wood
More of your technical questions answered

65 *INFO
More programs, hints, tips and graphical offerings

73 Frequency in the balance
Creating a software-controlled stereo equaliser

77 C for yourself
Extending the C library to provide more facilities

The Acorn User website

Check it out at:

<http://www.idg.co.uk/acornuser/>

Arthur Offer

Your chance to get Arthur at a special price. See page 76.

Next month in Acorn User

Top review of Top Model 2; first of a three part series of the Acorn NetStation; get clubbing with the Acorn Club Scene and lots more including, on the cover disc, *Iron Lord*, action and adventure

Next issue on sale 10 July 1997

Free ads

To pick up a bargain look on this month's cover disc

Subscribe now

Fantastic new subscription offers See page 78 for more details

• education

47 Editorial
A page of educational snippets on NStore and Sherston

49 Return of the King
CSH's incredible new Arthur CD reviewed

50 Wasting paper
How a product was developed to reduce paper costs

• reviews

26 The A7000+
What's the difference in the new model?

41 PublishArt 3
Take a look at the latest clip-art collection

41 Mr Clippy
Can organising clip-art really be made easy?

42 TBA F5
Does RISC OS really need another file compressor?

53 BBC Micro Emulator
Can you really play all the old Beeb games?

57 Drifter
Is this the herald of a new era of RISC OS games?

• features

29 Plain sailing
What's going on at Acorn now that they're on the up?

36 Horse trading
Using Acorn's in the factory setting

44 The Wakefield Show
We report on the premier Northern Acorn Show

Advertisers index

See page 75 for details



Acorn portable revealed at last

The long-awaited new Acorn portable was revealed, as promised, by Acorn at the recent Wakefield Show. The as-yet unnamed computer is sub-notebook in dimensions and its capsule-style case has an unusual finish which looks like a light shade of aluminium from a distance. It reminds you of an over-grown organiser at first sight, though there the similarity ends. The portable has been developed for one of Acorn's new technology partners and might be described as a portable Network Computer. If it qualifies as such it could make history as the world's first portable NC.

Although the portable was on show, Acorn were not allowing a hands-on play with it. Close examination reveals a track-point-style micro-joystick in the centre of the keyboard for mouse pointer control.

This is similar to Toshiba, IBM, Texas Instruments and some Compaq notebook PCs, but against the trend elsewhere towards a touch-pad mouse controller. Two mouse buttons appear to form an elliptical pad below the keyboard's space bar. The screen is a colour LCD of modest dimensions.



Acorn have to complete the portable project for their anonymous customer before work can start on adapting its specification for sale to the public via Chris Cox's products group. Although Xemplar have signalled they can manage without a new Acorn portable, Cox hasn't given up hope of persuading them that the portable will be an attractive schools computer. It's hoped that the portable will be launched officially at Acorn World later this year.

Malcolm Bird leaves

A highly respected name at Acorn, Malcolm Bird, is one of half a dozen staff within Acorn, some quite senior, who have been made redundant as part of the latest in a long line of restructuring moves. The redundancies are not specifically related to money-saving, according to an Acorn source, and were made with great reluctance and some sadness.

After de-centralising their corporate structure two years ago in order to differentiate their targeted new technology efforts from the old education business, Acorn are seeking to re-group around the Acorn brand now that it is no longer directly responsible for education products. David Lee, Acorn's managing director, is keen to

promote the Acorn name as a respected and attractive international technology company.

News of Malcolm Bird's departure was a shock. History will attribute much of Acorn's new-found direction in Network Computers to Bird who set out more than five years ago to promote Acorn technology as a basis for inexpensive multimedia-enabled alternatives to PCs. His work culminated in the formation of Online Media, which he headed. Although Online Media's progress was stifled by indecision in the interactive TV world, work done to produce the Online Media set top box (STB) was crucial to the lightning quick development of an NC prototype which won Acorn

their Oracle lifeline.

Bird, it seems, was a victim of Acorn's shrinking management structure as the Online Media division was scaled down. Two of the other redundancies are related to Online Media. Although Bird has worked on the NC project, much of his senior managerial function was duplicated by Peter Bondar and we can only speculate that in the end there wasn't room for both.

The good news is that some of those made redundant are hopeful of future opportunities with Acorn in new roles. Meanwhile, the company are still recruiting new engineers and the head count could actually be up by as much as 30 new people by the end of the year.

MPEG movie box

Castle Technology were playing cinema blockbusters off compact disc on their stand at the recent Wakefield show. The company, who are heavily committed to peripherals which use the SCSI (small computer systems interface) expansion standard, have started to sell a MPEG (Motion Picture Expert Group) digital movie player box which connects to a computer using SCSI.

In fact, at this stage Castle Technology are selling the MPEG box as a stand-alone MPEG movie player connected to a SCSI CD-ROM drive, but they are working on software to enable the computer to control the movie playback and this should be available later this year. Playback quality we witnessed at the show was very good; with no picture noise or digital artefacts (weird visual errors) and good sound quality. The SMD-100 Video CD box is priced £249 + VAT.

Castle Technology, tel: 01728 621222, fax: 01728 621179





Affordable film scanner

Acorn developers, we need native drivers for this latest Epson baby! Flat bed scanners are now affordable and very popular for digitising images of art work and photos as well as textual documents. However, until now, scanners for digitising film — negatives and transparencies — have remained prohibitively expensive; Nikon's cheapest model coming in at around £800, for example. Epson are set to change all that with the introduction of a film scanner aimed at the home and business market which has a recommended price starting at just over £400. At the same time, they have announced a printer specifically designed for photographic quality output.

The new *FilmScan 200* is capable of scanning both 35mm slides as well as 35mm film strips — both positive transparencies and print negatives. An optional Advanced Photo System (APS) adapter is available too. APS is the new easy-use film standard developed jointly by the main film producers, including Kodak, which could eventually replace 35mm as main consumer film type.

The *FilmScan 200* has an optical resolution of 1,200 dots per inch (dpi), which can be enhanced to an effective 4,800 dpi through interpolation techniques. The optical resolution equates to just under 300dpi when compared to a 6x4 inch print scanned conventionally, which is more than adequate for most applications outside professional publishing. Colour support is 30 bits per pixel, which exceeds the needs for all but the most exacting requirements.

Three *FilmScan* outfits will be marketed at first, including parallel port and SCSI interface versions for Windows PCs plus a Macintosh SCSI version. There is no native RISC OS support for the *FilmScan 200* yet but, like many other important peripherals in the past, it must surely be a matter of time before this is rectified. In the mean time, PC Card users should be able to use Windows versions of the scanner.

Epson's new photo-specific printer is the *Stylus Photo*. Like all other current Epson ink-jets, it uses piezo-electric print heads. It can handle paper sizes up to

A4 and features automatic picture adjustment of contrast, brightness and sharpness via a new driver. Epson have introduced a new photo-quality paper type which not only has a coated surface for maximum reproduction quality, but also perforated edges which can be detached to produce border-less prints.

It takes two minutes to print a photo and with a recommended price of £409, retail photo-finishers need not worry about mothballing their in-store equipment just yet, but Epson are showing that the digital photography revolution is advancing on more than one front. The *Stylus Photo* printer is designed to be an attractive match with both the new *FilmScan 200* as well as Epson's *PhotoPC 500* digital camera, which is already supported natively under RISC OS by Acorn specialists.

Whether you have made the conversion to all-digital photography or you're sticking with conventional film, Epson are trying very hard to convince you of the need for some sort of digital photo accessory. *Epson (UK) Ltd, tel: 01442 61144.*

3D browsing

Duncan McPherson, who from his e-mail address would appear to be at St Andrews university in Scotland, is inviting people to beta test his VRML (virtual reality markup language) browser for the World Wide Web. You will need a copy of Ace Computing/Oak Solutions' *!Euclid* package to use Duncan's software.

He says the browser currently allows you to export VRML1.0 files as Euclid files. Later he hopes to add support for a VRML2.0 parser, and a new completely re-written version of the Euclid module to support VRML2.0 nodes.

Andrew can be contacted at dfm@st-andrews.ac.uk or dfm@dcs.st-andrews.ac.uk and his home page is at <http://www-2nd-cs.dcs.st-andrews.ac.uk/dfm/home.html>

PhotoReal drivers

At last, from Spacotech, there is Acorn driver support for Canon's excellent new *PhotoReal* bubble jet printers. These new Canon printers use a combination of high resolution heads and extra intermediate colour inks to produce near-photo quality output of scanned images and other continuous tone art work.

The Canon models supported by Spacotech include the BJC240, BJC4200, BJC4550 and the BJC5500. Spacotech's *PhotoReal* software is priced £69 inc VAT and Spacotech can also supply any of the above printers. Spacotech, tel: (01305) 822 753, fax: (01305) 860 483, e-mail: sales@spacotech.co.uk

Acorn to the rescue

At a recent trade show, Digital Equipment had a spot of bother demonstrating their StrongARM NC. A Web browser produced by Oracle was to be used to demonstrate the NC, but according to Digital sources the browser was "unworkable." An Acorn browser was hastily secured to successfully demonstrate the Digital NC!

Compact scanner

A flatbed colour scanner for just £129 + VAT — sounds too good to be true? Well, there is a catch, or an advantage depending on your point of view. The 400dpi *Scanrom 4E* is just right for 6x4 originals, like the most common size of photographic print these days, but you can't scan anything larger. Artec say 6x4 is actually preferred by some because

there is no chance of the print moving around when you close the scanner lid.

The scanner can also accept colour slides, though the 400dpi resolution will limit its usefulness. Risc PC users with PC cards should be



able to use the *Scanrom 4E* and perhaps a native RISC OS driver will eventually be produced by a kindly Acorn software developer. Artec are looking for distributors and can be contacted at tel: 01952 588907.



Joystick interface

Stuart Tyrrell Developments (STD) have launched a new joystick interface for using PC joysticks with RISC OS computers. The interface plugs into the parallel printer port and although there is no through connector, STD can supply a suitable switch box if required.

Besides supporting Acorn programs, PCJoy can also be used in conjunction with software running on a PC Card. A full game port is provided enabling the use of joysticks which use four channels or the use of two joysticks using a standard splitter cable. The microcontroller-based device could be enhanced later in the year with a game port MIDI upgrade.

PCJoy is priced £39.95. STD, e-mail: Stuart@stdevel.demon.co.uk, Web: <http://www.stdevel.demon.co.uk>, tel: 0976 255 256

New SCSI cards

Both Castle Technology, very dedicated to the SCSI standard, and CD ROM specialists Eesox, are developing their own new SCSI 2 cards. Apparently neither are satisfied that the competition have produced the ideal SCSI 2 product.

Eesox cite unreliability in third-party products as a major factor in their decision to produce their own card. Castle Technology were demonstrating their prototype at the recent Wakefield Show and Eesox say their card should be available by the end of July, priced competitively at £125 + VAT

New IDE interface

Preston-based Simtec have released their new range IDE interface cards which are suitable for any RISC OS computer from the oldest A305 to the newest Risc PC. The cards are dual channel devices which can support up to four IDE devices, like hard discs or CD ROM drives, to be fitted.

If required, you can opt for an extra LED to be fitted to indicate drive activity. Firmware is on Flash ROM to enable easy software upgrades. Simtec say the cards are very easy to install and they even have a version for old A300 machines which don't have a podule backplane fitted. Simtec, tel: (01772) 812863, fax: (01772) 816426, e-mail: info@simtec.demon.co.uk

Acorn come second?

While there had been worried talk of Oracle messing around with Intel-based NCs, last month we revealed that Digital, who produce the 'Strong' version of the ARM processor, had done a deal with Oracle's NCI division to produce a new StrongARM NC reference design. So Oracle haven't abandoned RISC in their NC strategy after all — hooray!

But hang on a minute — the Digital/NCI deal mentions something called NCOS2. The original NCOS you will find inside any Acorn-derived NC is an adapted version of RISC OS. Unfortunately, NCOS2 is not a disguised version of StrongARM RISC OS. Oracle own the NCOS trademark and, indeed, NCOS2 is a specially tailored version of BSD Unix for StrongARM. This was hinted at a couple of months ago in our item about new firm, Causality, who have been set up to work in this field.

With NCI signing up a Digital StrongARM design using a non-Acorn operating system, the

immediate thought is, where does that leave Acorn and their StrongARM aspirations? 'Where we have always been', says Acorn's head of corporate affairs, Kevin Coleman, who points out that Acorn's relationship with Oracle and NCI is as strong as ever.

It takes no great intelligence to speculate that Acorn have a StrongARM NC design up their sleeve. However, they discreetly point out that they are not tied exclusively to their Oracle and NCI commitments. All the intellectual property developed by work for Oracle and NCI can be re-used by Acorn, and Coleman says they are very confident in making full use of the technology at their disposal. Digital have produced a design which appears to be aimed at high-end corporate customers, whereas Acorn have tended to concentrate on low-cost, TV-centric products and, of course, they are far more likely to be able to do OEM deals than Digital. There's plenty of room for both.

Intel copy Acorn?

When Windows 95 was revealed by Microsoft, Acorn users marvelled at the similarities shared by the new version and trusty old RISC OS — icon bar, pop-up menus, anti-aliased fonts (though far less flexible), solid drag windows and more. Now it seems Intel just might have taken a cue from Acorn regarding central processor installation.

They have launched a third development of their now famous Pentium processor, though for some odd reason have decided to call it Pentium II. Anyway, the most obvious feature of this new Pentium is that unlike all its predecessors, the chip is mounted on a small daughter card which

itself is plugged perpendicularly into a slot on the system board. Does that sound familiar — look inside a Risc PC just to remind yourself. Intel say they chose this configuration to solve heat dispersal complications caused by the new chip. At least that's one problem even a StrongARM Risc PC doesn't share with Intel's new baby.

Oh, and another bug has been found in the Pentium II's floating point co-processor, following on from the embarrassing episode Intel had to endure nearly three years ago when a similar problem was discovered in the original Pentium design.

British consumers revolting

Acorn users know just how long their computers can last before suffering from terminal obsolescence. Ten-year-old Archimedes, with a few subtle modifications are still working today. How many 10-year-old PCs are there out there running Windows 95? In fact there are many five-year-old PCs which can't run Windows 95.

So it's no surprise that PC owners are complaining that the useful life of their computers is just too short. Instead of giving in to the short lifetime cycle of the PC, British PC owners are keeping their computers for more than twice the time estimated to be the average life cycle for a PC, according to a study by GfK Marketing Services. This has caused a slow down in the growth of the UK PC market during the last year, though PCs still out-perform many other staple electrical and electronic products.

GfK IT specialist, Martin New, explained: "Our figures show that the majority of PC owners tend to keep their machines for about four years. However, the average market life cycle of a personal computer is around 18 months. Most households can't keep up at this rate, considering that the average retail purchase price for a PC is in the region of £1,400." The growth of the UK PC market has been slashed from 110 per cent in the year to January 1996 to just 20 per cent in the same period to January 1997, according to GfK. Just one in four PC owners changes their computer within two years and this sector consists largely of eager early-adopters aged under 34 years. In fact a survey of PC owners revealed that the perceived life span of their purchases was as much as eight years.

"British consumers are simply not used to replacing expensive electrical goods very often. Our research tells us that the majority of households will keep their TV sets for at least 10 years. Similarly, 68 per cent of camcorder owners will keep it for five years or more," said New. So the average life cycle of a PC is just 18 months. Hands up those using an Acorn rather older than 18 months! Your news editor even has perfectly usable Archimedes A420/1 which will soon celebrate its seventh birthday!

Acorn StrongARM Risc PC

4Mb 1.2Gb SA 14" Monitor	1350.08 £1149
4Mb 1.2Gb SA 17" Monitor	1702.58 £1449
4Mb 1.2Gb 8x CD SA 14" Monitor	1409.83 £1199
4Mb 1.2Gb 8x CD SA 17" Monitor	1761.33 £1499
10Mb 1.2Gb SA 14" Monitor	1643.83 £1399
10Mb 1.2Gb SA 17" Monitor	1996.33 £1699
10Mb 1.2Gb 8x CD SA 14" Monitor	1697.88 £1445
10Mb 1.2Gb 8x CD SA 17" Monitor	2055.08 £1749

fabfour Promotion!

Choose one of the following when you buy a new StrongARM Risc PC:

OPTION 1 - FREE SOFTWARE

Either for business:
DataPower / EasyWriter Professional / Eureka 3
or for family:
ArtWorks / Multimedia Textease /
The Ultimate Human Body

OPTION 2 - FREE MONITOR UPGRADE

Pay the 14" price but receive a
Fine Grain 17" SVGA Multiscan Monitor (AKF93)

OPTION 3 - FREE PRINTER

BJC-4100 Colour Bubble Jet Printer

OPTION 4 - FREE DIGITAL CAMERA

Casio Camera OV-10A with Connection Kit

Ethernet Interface & Access+

for Risc PC/A7000

16 Bit Minnie Audio Card

ESR 52.88 £45

Key Keyboard for Risc PC

Caslie 44.05 £38

PowerLink SCSI II Card for Risc PC

Altegra 195.05 £166

Risc PC 586-100 Card

Acorn 459.43 £391

Risc PC DX4-100 Card

Acorn 550.15 £298

Risc PC 1 - 2 Mb VRAM Upgrade

Acorn 99.88 £85

Risc PC (Series B and above)

Single Slice Upgrade

Acorn 88.13 £75

SIMM 4 Mb 32 bit

23.50 £20

SIMM 8 Mb 32 bit

39.95 £34

SIMM 16 Mb 32 bit

69.33 £59

SIMM 32 Mb 32 bit

139.83 £119

StrongARM Processor upgrade

Acorn 254.98 £217

New Acorn A7000+

A7000+ 8Mb HD 1.2Gb

1056.33 £899

A7000+ 8Mb HD 1.2Gb 8x CD

1145.63 £975

Acorn Network Computer

Corporate NC (Ethernet 10baseT)

457.08 £389

Home NC (Modem 28.8 kbps)

457.08 £389

Acorn Pocket Book

A-Link for Pocket Book

Acorn 59.93 £51

Flash Disk 512K

Acorn 88.13 £75

Flash Disk 1 Mb

Acorn 118.68 £101

Mains Adaptor

Acorn 18.80 £16

Parallel Link for Pocket Book

Acorn 31.73 £27

Pocket Book II 256K

Acorn 238.53 £203

Pocket Book II 1Mb

Acorn 304.33 £259

IDE cd kits

8-speed Kit for A3000 Series

ICS 233.83 £199

8-speed Kit for Archimedes

ICS 243.23 £207

8-speed Kit for Risc PC

ICS 155.10 £132

8-speed Kit + HD for A3000 Series

ICS 246.75 £210

8-speed Kit + HD for Risc PC

ICS 168.03 £169

with IDE

ICS 198.58 £169

IDE hd kits A3000

170 Mb Kit for A3000 Series

ICS 157.45 £134

170 Mb Kit + User Port

ICS 157.45 £134

400 Mb Kit for A3000 Series

ICS 182.13 £155

540 Mb Kit for A3000 Series

ICS 198.58 £169

IDE hd + cd kits A3000

170 Mb + 8-speed

ICS 381.88 £325

400 Mb + 8-speed

ICS 401.85 £342

540 Mb + 8-speed

ICS 401.85 £342

IDE hd kits Archimedes

1.2 Gb Kit for Archimedes

ICS 252.63 £215

1.6 Gb Kit for Archimedes

ICS 264.38 £225

2.0 Gb Kit for Archimedes

ICS 280.83 £239

IDE bare hard discs / cds

IDE 2 1/2" Hard Disc, 170 Mb

ICS 88.13 £75

IDE 2 1/2" Hard Disc, 400 Mb

ICS 163.33 £99

IDE 2 1/2" Hard Disc, 540 Mb

ICS 198.58 £119

IDE 3 1/2" Hard Disc, 1.2 Gb

ICS 186.83 £159

IDE 3 1/2" Hard Disc, 1.6 Gb

ICS 198.58 £169

IDE 3 1/2" Hard Disc, 2.0 Gb

ICS 217.38 £185

IDE CD Drive 8-speed

ICS 104.58 £89

IDE interfaces etc

IDE 3 1/2" Removable Hard Disc Cartridge

SO327, 270 Mb

SiQuest 42.30 £36

Removable Hard Disc Fitting Kit

for Risc PC 5 1/4" bay

ICS 23.50 £20

IDE CD Interface for A3000 Series

ICS 83.43 £71

IDE CD Interface for Archimedes

ICS 98.15 £78

IDE CD Interface for Risc PC

ICS 64.63 £55

IDE CD + HD Interface for Risc PC

ICS 77.55 £66

IDE HD Interface for A3000 Series

ICS 88.13 £75

IDE HD Interface for Archimedes

ICS 64.63 £55

IDE HD Interface for Risc PC

ICS 64.63 £55

IDE HD Interface + User Port

for A3000 Series

ICS 92.83 £79

CD External Case with PSU

ICS 85.78 £72

Second Hard Disc Fitting Kit

for A5000

ICS 17.63 £15

Printers

BJ-30 Bubble Jet Printer

Canon 163.33 £139

BJ-200 Bubble Jet Printer

Canon POA POA

BJC-700 Colour Bubble Jet Printer

Canon 173.88 £145

BJC-150 Colour Bubble Jet

Canon 170.38 £145

BJC-240 Colour Bubble Jet

Canon 163.33 £139

BJC-620 Colour Bubble Jet

Canon 290.23 £247

BJC-4200 Colour Bubble Jet

Canon 199.75 £170

BJC-4550 Colour Bubble Jet

Canon 645.08 £549

DeskJet 600

HP 259.70 £224

DeskJet 870CXL

HP 386.59 £339

EP-L Toner Cartridge for LBP-4

Canon 69.33 £59

EP-S L Toner Cartridge for LBP-8

Canon 78.73 £67

LaserJet 6L

HP 381.88 £325

Stylus 200

Epson 139.83 £119

Stylus 500

Epson 258.59 £229

Stylus Color 200

Epson 178.08 £149

Stylus Color 600

Epson 278.45 £237

Memory

A805/310/440 1 - 4 Mb

IFEL 104.58 £89

A8000 1 - 4 Mb

IFEL 81.08 £69

A8010 1 - 2 Mb

IFEL 43.48 £37

A8010 4 Mb

IFEL 92.63 £79

A8020 2 - 4 Mb

IFEL 76.38 £65

A8000 2 - 4 Mb

IFEL 76.38 £65

Other hardware

A8000 Case for Expansion Card,

special offer

Watford 14.10 £12

Canoscan 300 (scsi)

Canon 314.90 £268

Canoscan 600 (scsi)

Canon 645.25 £550

Canoscan 6000 (scsi)

Canon 1089.99 £949

With Connection Kit

Acorn 499.38 £425

Casio Camera QV-100

With Connection Kit

Acorn 499.38 £425

Casio OV-10A/100 Connection Kit

Acorn 115.15 £98

DeskTV Entry Card

Standard Card

Yellowstone 217.38 £185

With Tuner

Yellowstone 257.33 £219

Mini Max

CC 77.55 £66

Mouse for Acorn

CPC 19.98 £17

Movie Magic (Risc PC only)

CC 209.15 £178

Mozart Digital Audio

Yellowstone 69.33 £59

PhotoView, offer

Acorn 34.08 £29

PowerWAVE 50XG

Audio 297.28 £253

QuickCam Colour

Oregon 198.58 £169

RISC OS 3.1 Rom Pack, 3 set

Acorn 88.95 £74

RISC OS 3.1 Software Upgrade without

documentation

Acorn 45.83 £39

Risc TV

Ham 280.83 £238

ScanLight 256

CC 150.40 £129

ScanLight 256 for

A3000/100/3020/A4000

CC 162.15 £138

ScanLight Video 256

CC 165.65 £138

AS10/400/5000 Risc PC

CC 165.65 £138

Sound Byte Recorder

VTI 48.18 £41

Sportster FLASH external

(free upgrade)

US Robotics 198.58 £169

Sportster Voice 33.6 kbs external

(upgradeable)

US Robotics 148.05 £126

TV Tuner with Teletext, offer

CC 111.63 £95

Vision Master Colour Monitor 17"



Jaz drive recall

Iomega have revealed that a batch of their removable disc cartridges for the Jaz drive model could develop faults within normal usage and so will be replaced with a complimentary disc. The fault has been pinpointed as a sub-standard component which could result in performance degradation and even data loss.

You can identify potentially faulty Jaz discs by examining the back of the casing and looking for a date and manufacturing code. The danger period is March 13 to April 20 and under the date markings a code ending with the letters 'MS'. If customers think they have a faulty disc, they should contact Iomega via a hotline to their Irish support facility on tel: (00 353) 1 807 5599. Iomega can also be contacted via e-mail at eurosupport@iomega.com.

StrongARM notebook

Acorn are apparently not the only company working on an ARM-based notebook computer. Reports from the US suggest that the Canadian Corel Corporation are developing a StrongARM-based notebook computer. A version of the OS/9 operating system will probably be used to run Java and even Windows applications. The new machine is likely to make its debut at Comdex Fall in November.

How much seriousness can be attached to the reports is debatable. Corel originally announced they were to bring out a Java-based personal digital assistant (PDA), but this has now apparently been shelved. Comdex Fall is still six months away — a long time in the computer industry. Of course, Acorn might really be the only ARM notebook developers after all, and Corel might be the secret customers, but Acorn wouldn't tell us even if we asked.

World's first DVD RAM drive

By the end of June Hitachi are expecting to start shipping sample quantities of their new *GF-1000DVD-RAM* drive for PCs. The device is designed to conform to the specifications for DVD-RAM which were announced recently by the DVD (digital video disc) Forum. DVD-RAM, as opposed to ROM, is rewritable DVD offering a maximum capacity of 2.6Gb per side of a 5.25 inch DVD compact disc. Hitachi's announcement follows the company's recent release of their *GD-2000* double-speed DVD-ROM drive.

The GF-1000 has a double-speed transfer rate of 2.76Mb per second. A 650 nanometre laser is built into the read/write head for data reading and conventional CD ROM compatibility is included. Alongside this is a second, 780 nanometre laser, which deals with CD-R (eg. Kodak Photo CD) read-only functions. Conventional CD-R recording is not supported, however. Hitachi believe demand for DVD drives will reach 70 million units by the year 2000 and of these some 30 million could be of the rewritable RAM type.

Internet TV launch

Curtis Mathes, the US company who have commissioned Acorn to develop an Internet add-on for domestic TVs, have unveiled the first fruits of the project called *UniView*. This provides access to the Internet from your television and also allows you to talk on the telephone and view TV programme guides. In Curtis Mathes' own words, the \$399 (£240) *UniView* box is aimed at the ultimate couch potato.

Despite interest generated by Microsoft's recent decision to invest in Internet TV through their acquisition of WebTV, observers are far from convinced that there is a big enough market yet. A Curtis

Mathes spokesman commented: "This is a big deal for the company. It's a gamble, yes. It has to be proven out."

Curtis Mathes believe Microsoft's *WebTV* product itself is the explanation behind the current Internet TV market pessimism. The Curtis Mathes spokesman explained: "We believe the *WebTV* is the wrong product for this marketplace and that's why it hasn't taken off." He added that as they were TV manufacturers in their own right, Curtis Mathes had produced a design which was right for TV viewers rather than computer users. "These are people who would be the last people to buy a computer.

That happens to be most people in the United States," added the spokesman.

UniView can be used to explore the Web, use e-mail, send faxes, make phone calls and access the Curtis Mathes *Xpressway*, which is described as a resource for entertainment, sports, business, news and shopping. The box is even equipped with a credit card reader for online purchasing.

News of the official launch of *UniView* will be big boost to Acorn, who apparently have a number of lucrative technology development contracts with third-party companies, but are not allowed to publicise them.

European lag for WebTV?

Forrester Research in the US have declared that in the medium term it will be slow-going for Web-TV. As Europe tends to lag behind the US, it's even more gloomy for this side of the Atlantic. Forrester's Web-TV pessimism placed a question mark against the sense in Microsoft's recent announcement that it intends to invest \$425 million in the acquisition of WebTV Networks, based in Palo Alto, California. It also served to dampen optimism for the Acorn-developed Curtis Mathes *UniView* Internet TV solution launched this month (see above story).

"Web browsing is simply not compelling enough to attract today's TV viewers," said Josh Bernoff, senior Forrester analyst. He added: "It will take three years for the industry to create hardware and content that can deliver what consumers really want — interactivity that enhances their television experience." Bernoff

suggests that simpler, more utilitarian devices like Internet screen phones would have a faster route to market. Devices like these would deliver quick access to directories, weather and integrated voice, Internet and e-mail services. Forrester predicts a million screen phones could be in existence by 1999.

Web TV's time will eventually come, according to Forrester, but that may not be until at least 2002 and the potential market could be 14.7 million homes. "These changes will challenge TV networks to broaden their interactive competency and put pressure on computer makers to simplify their interfaces," Bernoff explains. He predicts that new interactive service providers will eventually evolve using inexpensive net-enhanced devices like phones and TVs to challenge conventional on-line services like America Online.

Contacting me

You can contact the news page by writing to me Ian Burley at the usual Acorn User address or by e-mail: aunews@idg.co.uk

Buy with confidence from

BEEBUG

Acorn
Specialists
for over 15 years!



WEB ZONE

Beebug have created a new Web Zone within their showroom in St Albans. This is a new area dedicated to providing public Internet access - particularly of benefit to those people who do not want to buy the equipment needed, or for those who would like to have a go before purchasing a complete system. At only £4 per half hour and £7 per hour, pre-booking is recommended. Please phone 01727 840303 for more details or to book your time.

NEW Acorn A7000+

This is the first production Acorn computer with an integrated Floating Point Accelerator. The combination of a fast 7500FE processor and high-speed EDO DRAM give a dramatic improvement in desktop performance, but with no increase in price! The A7000+ offers: 8Mb EDO RAM, 1.2Gb IDE hard drive, RISC OS 3.71, Floating Point Accelerator, Integrated 16-bit digital stereo sound, 1.6Mb floppy drive, VGA, SVGA, and other resolutions

A7000+ 8Mb HD1.2Gb £1099.00

A7000+ 8Mb HD1.2Gb 8xCD £1199.00

17" Monitors - Only £399 inc VAT

If you are looking to upgrade your current monitor or purchase a new system then you can't afford to miss this special offer! Fully tested and compatible with Risc PC's (and PC's). We will even trade-in your existing monitor as follows: Standard 14" £45, Multiscan 14" £95. (Subject to inspection).

Internet Service

We have initiated a complete set up service. Send or bring your computer to us and we will return it all set up ready to access the Internet, send emails, and surf the Web.

What you'll get:

- An account with Demon Internet
- USR 33,600 external modem
- Internet accessing software
- Email accounts for up to 9 users
- Up to 5Mb of Home Page space available
- Your own Home Page created
- One years unlimited access to the Internet, Email, WWW
- Your computer completely configured ready for use
- Internet Survival Guide
- Free 'get you started' help line for 10 days

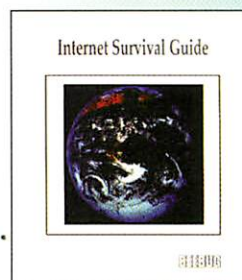
Subject to demand we will return your computer to you within 3 working days (from our receipt of your computer), at £15 for 24 hour insured courier delivery.

All we need from you are some basic details and Home Page text and layout. Please telephone us for further details and an Internet Service Order Form.

We can configure any Acorn computer that meets the following specification: 4Mb RAM, Hard Disc with 10Mb free, RISC OS 3.1 or later, working serial port.

Code INTAG Internet Service £525.00 inc VAT

PC Internet Service also available



New StrongARM Risc PC's Clan Special Offers

Includes **BEEBUG Special Offer of Free RISC User Magazine Subscription & Free Ovation DTP**
Plus 0% Finance (Phone for details)

Purchase a StrongARM Risc PC and you can choose one option per machine.
Clan Membership £15.
Offer valid from
1st June - 29th August 1997

OPTION 1

**Family Software Pack:
DK Ultimate Human Body
Multimedia TextEase
Artworks**

Worth £266.73

OPTION 2

**17" SVGA Multiscan Monitor
(AKF93)**

**For the price of a 14" SVGA
Multiscan Monitor (AKF60)**

Worth £158.63

OPTION 3

**Free BJ-4100 Canon Bubblejet
Colour Printer**

Worth £292.57

OPTION 4

**Free QV10A Casio Digital
Camera including serial link,
Photo QV Software and
Application Guide**

Worth £376.00

**Acorn Network
Computers
ONLY
£468**



BEEBUG Ltd., 117 Hatfield Road, St Albans, Herts AL1 4JS
Tel: 01727 840303 Fax: 01727 860263 Email: sales@beebug.co.uk
Chargeable Support Hotline 0897 596 000
All prices inc VAT Courier delivery £11.75



New products /upgrades

PRODUCT	NEW FEATURES/PRODUCT DETAILS	PRICE	CONTACT
Professional Typography CD	<ul style="list-style-type: none"> Contains professional quality Acorn fonts Fonts in two formats – RISC OS 3 and Publisher Comes with wall chart containing all EFF fonts 	£69 (private users), £99 (schools), £149 (companies). Prices include VAT. Individual fonts – £7 +p&p + VAT per weight.	Electronic Font Foundry Tel: (01344) 875201
Village Life in India CD-ROM	<ul style="list-style-type: none"> A spectacular tour of southern India involving games, activities, graphics, interactive stories, video clips and authentic Indian music 	£55	Cambridge University Press Tel: (01223) 325914
Coypu	<ul style="list-style-type: none"> Educational equation and data plotter is now published by October Pen Software Supported and developed by the original author Full details and free downloadable demo from Web site 	Single user £50, school site licence £120, dual format (PC & Acorn) site licence £170	October Pen Tel: (01705) 592521 WWW: http://www.octpen.demon.co.uk
128Mb SIMM for Risc PC	<ul style="list-style-type: none"> A low profile board using the latest 256MBit chips Only 16 of these devices are required to provide the 128Mb 	£899 inc VAT and carriage	Clares Micro Supplies Tel: (01606) 48511
WebMaster	<ul style="list-style-type: none"> Web site editor Extensive site management From creating your site through to publishing it on the Internet 	£99 + VAT. Special price of £89 + VAT for members of the Clan or CD Circle	Innovative Media Solutions Ltd Tel: (01934) 522880
ProCopy	<ul style="list-style-type: none"> For making multiple copies of a disc Designed for use for organisations to make copies of a subscription disc or circular Enhanced version of !Copier 	ProCopy is Shareware, allowing 30 days evaluation. Standard registration for a single computer costs £15.	David Holden, 39 Knighton Park Road, Sydenham, London, SE26 5RN. Tel: 0181-778 2659
Textfind	<ul style="list-style-type: none"> Search text files (individual, lists or directories) for a word or phrase Enables you to produce a list of references with the filename and line numbers where match was found Use list to jump to sections of files you wish to read 	Shareware allowing 30 days evaluation, then £5 for registration	David Holden, 39 Knighton Park Road, Sydenham, London, SE26 5RN Tel: 0181-778 2659
HTML Designer (v0.04)	<ul style="list-style-type: none"> Internet publishing system 	£25	ARM Solutions Tel: (01384) 865580
Task Force Clipart	<ul style="list-style-type: none"> Produced by Canadian company NVTech Over 10,000 images plus a bonus of 500 photographic images 	£30 inc VAT, includes catalogue of entire collection	Akalat Publishing Tel: (01582) 881614
CDFast 2	<ul style="list-style-type: none"> Improved version with added functionality for faster CD-ROM drives Significantly improves performance of most CD-ROM applications 	£25 + VAT and only £15 + VAT with an Eesox CD-ROM drive	Eesox Tel: (01954) 212263
Clicker plus resource packs	<ul style="list-style-type: none"> Includes a phonics pack and poem pack Nursery rhymes are enhanced by sound effects in first clicks resource pack 	Packs start at 325 +VAT	Crick Software Tel: (01604) 671691

Cumana land exclusive deal

Cumana are to be sole authorised development partners and distributors for SyQuest removable storage product technology in the Acorn market. The EZFlyer 230 is SyQuest's answer to the Iomega Zip drive that stole the removable market from under SyQuest's nose in an amazing PR coup.

Cumana have already adapted the SyQuest EZFlyer 230 3.5 inch removable hard disc cartridge system for use in later model Acorn computers with bidirectional parallel ports.

As its name hints, the drive cartridge has a capacity of 230Mb, more than double that

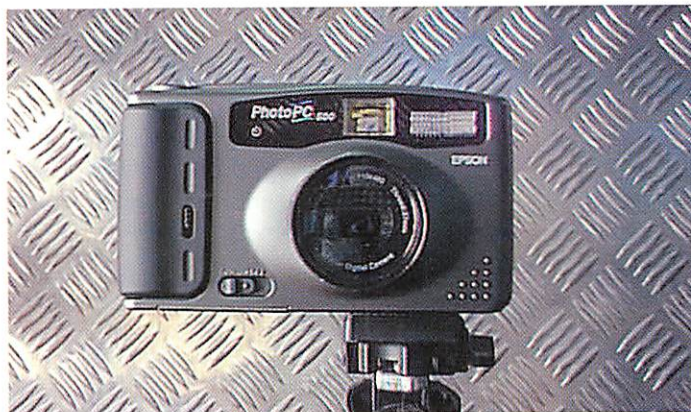
of the Zip drive. The question is, can SyQuest regain the ground lost to Iomega?

Cumana are now supplying Acorn-specific drives complete with one cartridge for £219 + VAT. Additional cartridges cost £20 + VAT each.

NEW! - Epson Digital Camera

High resolution, 24 bit colour digital camera

- High quality colour digital camera - as easy to use as a conventional 35mm compact.
- 24 bit colour sensor providing 16.7 million colours.
- Optical resolution of 640 x 480 pixels - twice that of many other comparably priced digital cameras.
- Connects to RS232 port - no interface to fit.
- Built-in four way flash - automatic, always, never, and red-eye reduction modes.
- Self-timer, erase last/every picture functions.
- 37mm thread accepts camcorder lenses and filters.
- Standard 2Mb memory stores up to 60 standard resolution (320 x 240) pictures, or 30 high resolution (640 x 480) pictures, or any combination.
- Optional 2Mb and 4Mb memory upgrades, which allow up to 200 pictures to be stored.
- Tripod mounting boss.



Package includes our *Snapshot* application software, allowing you to quickly download pictures and view them as thumbnails. Selected pictures can then be easily saved as either Sprite or JPEG files.

Introductory price £499, including carriage and VAT. Includes camera, a set of batteries, serial lead, all necessary software, and manual.

24i16 Multimedia Card

Combined 24 bit digitiser and 16 bit sampler

- Advanced 24 bit video digitiser with stereo 16 bit sound sampler.
- Captures brilliant still images from any S-VHS or composite video source, plus superb Replay movies, and hi-fi audio.
- 1Mb framestore captures still images at full PAL resolution, 768 pixels x 576 lines.
- Replay movies (including sound) can be recorded, image size and frame rate are fully adjustable and are limited only by hard disc and system bandwidth.
- Sound sampler records at sample rates up to 48kHz.
- Hardware video scaling and anti-aliasing, plus real-time control of brightness, contrast & saturation.



Package price £472.94, including carriage and VAT. Includes expansion card, all necessary software, and comprehensive manual.

ColourMobile

Motorised 24 bit colour hand scanner

- 24 bit colour scan head providing 16.7 million colours.
- Resolutions from 100 to 400 dpi (interpolated).
- Connects directly to bidirectional parallel port - no interface to fit.
- Works with printers, dongles, and parallel CD-ROM drives.



"Intuitive and remarkably easy to use... scans are outstandingly sharp with excellent colour accuracy... What more can I say?" - Archimedes World.

"Operation is extremely easy... the results were excellent..." - Acorn Publisher.

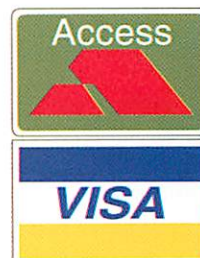
"The detail is impressive... this is a good scanner for schools and home DTP users." - Acorn User.

Special price £199, including carriage and VAT. Includes scanner, interface, all necessary software, and manual.

i For the Complete Picture...

Irlam Instruments Ltd, Brunel Institute for Bioengineering, Brunel University, Uxbridge, Middlesex, UB8 3PH. Tel/Fax 01895 811401. Email: sales@irlam.co.uk

Please note: All products require RISC OS 3.1 or later, a hard disc, 2Mb RAM minimum (4Mb recommended). Check suitability for your computer before ordering. All hardware products come with a full 1 years guarantee. E & OE.





PHONE ORDERS:
01728 621222



FAX ORDERS (24HR):
01728 621179

**NEW
SINGLE-PASS
versions**

**FROM
£199**

SCANFLAT II

SCSI Flatbed scanner
plus SCSI II Interface



Scanflat II 600 & 800

The single pass high quality Scanflat II range of A4 flatbed scanners is a new and improved version of the highly successful Scanflat series. With a new compact footprint to save space, improved scanning speeds and quiet operation, the Scanflat II provides both quality and ease of use for the busy office or classroom. Available now in 600dpi and 800dpi versions.

- ◆ New versions with 400x290mm footprint
- ◆ High resolution Scanflat 1200 still available
- ◆ Line art, grey or 24-bit colour modes
- ◆ Pre-scan colour/brightness control
- ◆ Free ImageMaster Software & TWAIN driver
- ◆ PC SCSI interface & software kit £45 extra
- ◆ 25 way SCSI cable included
- ◆ Full 1 year guarantee

Scanflat 1200

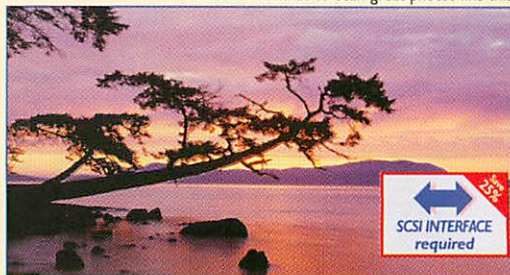


Scanflat II with Transparency adaptor



Price in brackets includes VAT	Scanner Price	Trans. Adaptor
Scanflat II 600 (600dpi)	£199 (£233.83)	£149 (£175.08)
Scanflat II 800 (800dpi)	£299 (£351.33)	£149 (£175.08)
Scanflat 1200 (1200dpi)	£349 (£410.08)	£199 (£233.83)

Use the Scanflat to scan great photos like this!

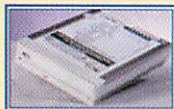


REMOVABLE DRIVES

**FROM
£129**



ZIP



MaxIT



EZ Flyer



PD Drive

ZIP DRIVE. A fast portable drive from Iomega which uses special 100Mb discs similar in size to the familiar floppy. A top selling drive using proven technology. 1Gb **JAZZ** drive also available (call).

MaxIT. A recent product from MCD combining portability with very high performance. It will accept either its own 540Mb cartridges or SyQuest 270Mb cartridges. External drives are in bright yellow or dark blue.

SyQuest's **EZFlyer** is the higher capacity successor to the popular EZDrive. It uses its own 230Mb cartridges, but will also accept EZ135Mb cartridges.

The **PANASONIC PD** drive is both a fast 4x speed CD-ROM drive and a high capacity 650Mb optical drive all in one. It not only accepts standard read only CD-ROMs but can also both read and write to its own Panasonic PD 650Mb optical discs.



**UNLIMITED
STORAGE
CAPACITY**

- ◆ Fast back-up for your data
- ◆ Low cost - from only 4p per Mb
- ◆ Easy to install, easy to use
- ◆ 1 year warranty
- ◆ 25-way SCSI cable included
- ◆ Compact portable versions are available (except Panasonic PD)

Price in brackets includes VAT	Data transfer rate	Media capacity	Media price	Compatibility	Price: portable version (incl VAT)	Price: Internal (bare drive) (incl VAT)	Price: External (Combo case) (incl VAT)
Iomega ZIP	up to 1.4 Mb/sec	100Mb	£12	n/a	£129* (£151.75)	£129 (£151.75)	£189 (£222.08)
MaxIT	up to 10 Mb/sec	540Mb	£49	SyQuest 270Mb media	£309 (£363.08)	£249 (£292.58)	£309 (£363.08)
SyQuest EZFlyer	up to 2.4 Mb/sec	230Mb	£18	EZ 135 media	£249* (£292.58)	-	-
Panasonic PD	up to 1.1 Mb/sec	650Mb/680Mb	£29 (650Mb optical)	CD-ROM	£345 (£405.38)	£345 (£405.38)	£405 (£475.88)

MPEG PLAYER

£249



The SMD-100 Video CD MPEG decoder can be used as a stand-alone unit connected to a SCSI CD-ROM drive or as a device in a chain of SCSI peripherals connected to your Acorn. The unit can be connected to a SCART TV or an Acorn 15kHz monitor to play your VideoCD film in 24-bit colour and 16 bit stereo.

- **FREE - Video CD (film)**
- **SCART / monitor cable £12 (£14.10) (specify model)**



- ◆ Decodes CD-i and Video CD
- ◆ NTSC and PAL compatible
- ◆ Requires 2x SCSI CD-ROM or faster
- ◆ Use with SCART TV screen or some RGB monitors
- ◆ I/R remote control included
- ◆ GENLOCK 'In' socket

MPEG Player £249 (£292.58)

ETHER SCSI CARD

**FROM
£148**

A unique two-in-one solution from Castle Technology's New Products Team providing both networking and expansion on one card. For all Acorn computers (except A30x0 / A4000).

- ◆ Access, Omnicient, AUN etc compatible
- ◆ Co-ax and twisted pair ethernet sockets
- ◆ Internal and external SCSI ports
- ◆ Acorn DC14 compliant
- ◆ Conserves precious slots



CASTLE TECHNOLOGY
01728 621222

Delivery £10 (£11.75 inc VAT) per order.

VAT inclusive prices are in red.

Cheques (allow 5 working days to clear), debit cards (Switch & Delta), credit cards (2% charge may apply), and educational orders accepted.

All trademarks acknowledged. E&OE



CASTLE TECHNOLOGY
Ore Trading Estate Woodbridge Road
Framlingham Suffolk IP13 9LL
e-mail: sales@castle-technology.co.uk
Web: http://www.castle-technology.co.uk

The model 3D application?

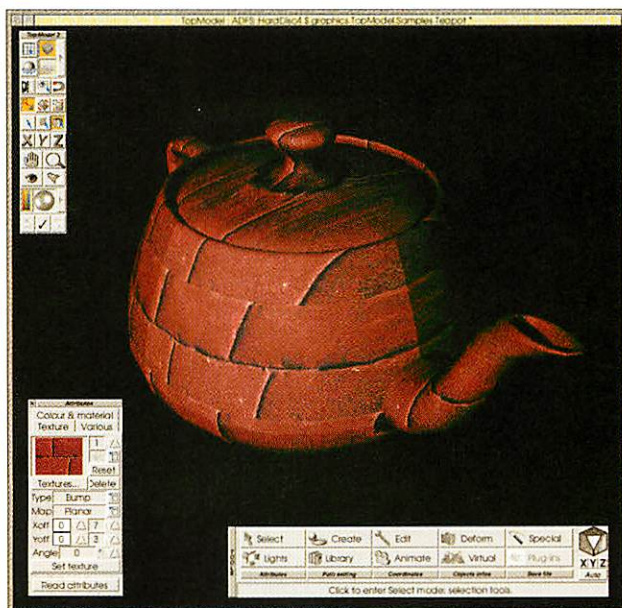
It has been a long wait but *TopModel* 2, the program which Italian authors Sincronia claim to be the best 3D modelling solution for the Acorn platform, has finally landed on British shores. Spacetechn, the UK distributors started shipping the final release version late in April, the product having improved considerably over the pre-release version reviewed by Paul Wheatley on this page several months ago.

From the outside, this new generation of *TopModel* looks very similar, with the same box and manual graphics. Only a colour sticker saying 'New Version 2, Gemini inside' distinguishes it from its predecessor. Also in keeping with the original version, the manual is strewn with errors, grammatical and otherwise. It is far easier to follow than the last manual, even though it really should have been edited by an English speaker.

The application itself is easier to load than before, when the tortuous Gordian protection system was used, and much simpler to use once loaded. The interface has undergone a necessary but radical redesign and despite there being even more tools and functions available than before, the intuitive toolbar and menu systems work wonderfully. It makes the program a joy to use rather than a misery.

As far as speed goes, this is certainly one of the fastest graphics engines available on the Acorn platform and even the most complex scenes, with tens of thousands of polygons, can be managed by StrongARM machines quite comfortably. This is thanks to the Gemini graphics engine which also supports real-time reflections, lens flare and fog effects and is ready to receive a radiosity rendering plug-in for much warmer (but slower) shading.

With the application comes a variety of *TopModel* designed example and tutorial files to



inspire and teach the fundamentals through to the most complex functions. There is also a browser which allows, among others, the reading of VRML files as well as *TopModel* scenes. The fast and simple import and export applications cope with a wide variety of industry-standard modelling formats including VRML, DXF, Lightwave and Sculpt3D.

One complaint about the package is its fragility. It would have been nice to test a release product that never crashed or hung the computer. More details on how it behaves and what can be achieved with *TopModel* 2 in the full review next month. More importantly, the review will judge whether the long wait for *TopModel* 2 was worth it and if the package will carry 3D graphics on the Acorn through the next year or so as it promised it would.

Spacetechn
Tel: (01395) 822753
E-mail: sales@spacetechn.co.uk

New version of classroom Impression DTP Guide

Impression Style and *Publisher* are two of the most commonly used DTP products in secondary schools. Dr Wood's original *Impression* guides have been fused into one covering both the *Style* and *Publisher* applications.

This 64-page, wire-bound booklet with an attractive colour cover goes through all the ins and outs of the *Impression* series in a very well-organised and readable manner. All the pages have large print and screenshots making it an ideal desktop guide which is easily referenced and equally easy to read.

It is quite obvious that the guide has been written by a practising teacher who knows the way that both children and teachers absorb information. It is also very good value at only £9.95.

Paragon Publishing
Tel: (01604) 832149
E-mail: Mark-Webb@MSN.com

Free mousemat with PublishArt 3

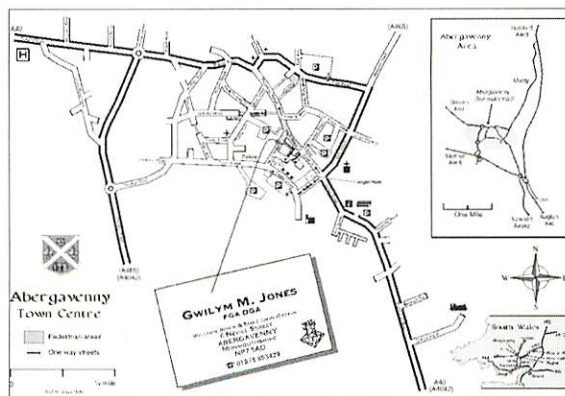
In the reviews section this month I look at Smart DTP's new clipart CD-ROM. As a promotional stunt, the very useful, bright and colourful *PublishArt 3* mousemat will be bundled with the package if you mention *Acorn User* magazine when ordering.

Smart DTP
Tel: (01332) 842803

The first ever map of the month winner

This is the first DTP winner of the new extended pic of the month competition since we opened it up to DTP, Web site and icon entries. Mr Gwilym Jones created this detailed street map using *!Draw* aided by Kell Gatherer's *!Streetmap* application which converts lines into roads. If only real road building was that simple!

The hardware was either A5000 or StrongARM RPC depending on where the construction work was taking place. Over the years it has helped Mr Jones' visitors to navigate the pedestrianised town-centre with ease. The map is available as a *Draw* file from the AU Web site.



Contacting me

You can contact the graphics and DTP page by writing to me, Jack Kreindler, at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to augrafix@idg.co.uk.

CUMANA

And



SyQuest®

LATEST NEWS

bring you
the....

ezflyer™ 230MB
REMOVABLE CARTRIDGE HARD DRIVE

OFFER PRICE
£219
PLUS CARRIAGE + VAT

Cumana are pleased to announce the availability of Acorn drivers for the SyQuest EZFlyer 230MB parallel-port removable cartridge hard drive.

We are the Sole Authorised Development Partner and distributor for SyQuest Technology for the Acorn market.

These high capacity, high performance drives have an excellent media cost - a fraction over 10p/MB when bought as part of this offer. They use a well-proven drive technology giving 13.5ms access time and the media is widely available. The ezflyer is an ideal solution for those wishing to add further drive space or take essential regular backups of important data and applications.

The Cumana drivers are compatible with a wide range of Acorn computers from the A3010 to the StrongARM-powered RiscPC. A bi-directional parallel port is required so unfortunately this drive is not suitable for A300/A400/A3000 or A540 computers - but please do give us a call for a quote on a SCSI version of the drive. The drive also features a through port for attaching a printer and is supplied with PC/MAC drivers PLUS one free 230MB media disc.

Special Offer Price Oscar CD-ROM Package



Oscar CD-ROM Drive
(includes headphones and PC/Acorn driver software)
+ Free Choice of 4 from 14 Anglia Multimedia CD-ROM titles for just....

£299.00
(Inc. Carriage-Excluding VAT)

Indigo

The Indigo ATAPI internal fit CD-ROM drives offer 8 speed performance and are ideal for the Acorn Risc PC and A7000. StrongARM compatible.

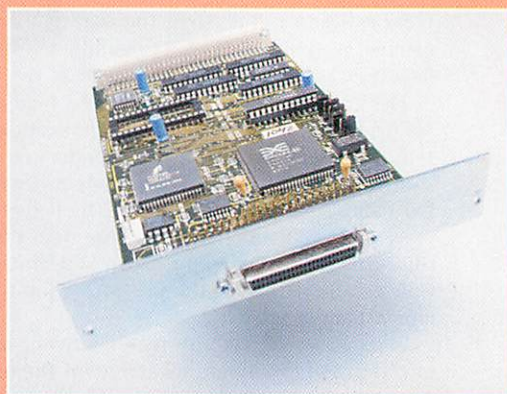


Indigo CAA380i (as detailed) £99.00 + VAT
(Order code: 3-1518-A)
Indigo CAA380iA (as detailed plus audio mixer and Clares ProArtisan 2CD)
£149.00 + VAT (Order code: 4-1519-A)

The offer price of £219

(normally £239 plus carriage & VAT) is only available until May 31st 1997. For further details or a full specification please call the Cumana team on: Tel: 01483 503121.

SCSI II interface card for Risc PC



Features:

- * The SCSI driver is fully Risc OS compliant to support the Risc PC 600, 700 and StrongARM
- * Supports up to 256kB of on-board Flash EPROM along with **FREE technical support** and upgrades from floppy disc or can be downloaded from the Cumana Website
- * 32 bit DMA transfers supported on the Risc PC giving 7Mb/sec
- * Built-in security for CMOS RAM and EEPROM
- * Supports 8 logical drives on the icon bar
- * New icon bar management features include the ability to "stack" multiple drives to save icon bar space
- * Support for DOS format media (e.g. proTeus, SyQuest and Jazz)
- * Drive mapping and configuring from the icon bar plus support for user defined user icons

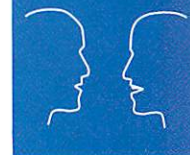
SCSI II interface £149.00 + VAT
(Order code: 3-1040-A)

SCSI II cable £15.00 + VAT
(Order code: SCSI2-50)

Call the Cumana team for further details and a copy of our 1997 Catalogue.
Tel: (01483) 503121 Fax: (01483) 451371 E-mail: sales@cumana.co.uk
www.cumana.demon.co.uk

The Cumana product range is also available through your local dealer

Cumana, Boundary House, The Pines,
Broad Street, Guildford, Surrey, GU3 3BH



The world according to Rick

When I begin an article for this page, I am faced with a blank space that almost defies me to put some words into it. Much the same situation occurs when you open an Internet access account that gives you free Web pages. You have to decide how and what to say to the world with your own Web space.

While some people like to show off their skill with images, animations and clever features, others feel that content and information better convey their personalities. One such is Richard Murray, whose *BudgieSoft* Web pages hosted by Argonet are a good example of a site that contains more HTML than graphics.

Richard's pages describe some of the important things in his life – boeuf stroganoff, mature cheddar, more mature cheddar, bean pizza, music by MeatLoaf, TV and movies. His list of loves also includes his mom, who even has her own home page on the site. How many other sons have paid their mother's such a tribute?

In spite of his avowed dislike of mathematics, olives and physical work, Richard Murray has written lots of software for RISC OS, from his well-known BBS doors and utilities to a feature-laden Econet user editor and management system called

BudgieMgr. The BudgieSoft name honours a fondly-remembered pet bird called Stephanie.

A demo version of *BudgieMgr* can be downloaded from the site, and details of other programs like his enhanced graphics ANSI terminal system, *Mterm*, can be found here.

The Econet enthusiasts page has useful information on the history, installation and management of Econet networks and shows that Rick really appreciates Econet technology.

Frobnicate is the anarchic digital Acorn magazine compiled and edited by Rick in his notional guise of Hissing Spinach Publishing.

Supplied in zipped *Ovation* format, the magazine has reached issue 12 with an estimated circulation of about 75, and is available both from bulletin boards and John Surcombe's Demon Web site at <http://www.surcombe.demon.co.uk/frobnicate/>

The blank space I started with is now filled with words, and Rick has also filled his space. Don't be put off by its high textual content and let this site give you an insight into the Web world of Richard Murray.

Richard Murray's *BudgieSoft* site
<http://www.argonet.co.uk/users/rmurray>



E-mail with Squirrel Solutions

NetMail is a new AUN-compatible e-mail package with advanced features allowing *Level 4* network users to send mail and attached files to other users. If a modem is available, *NetMail* can also link into the world-wide FidoNet BBS network. Its server and client applications are stored on the server machine, so no local hard disc is needed. *NetMail* costs £30 inc VAT and a demo version will be available from BBSs. Contact Glenn Richards at Squirrel Solutions for more information.

Squirrel Solutions
richards@arcticbb.demon.co.uk

E-mail pollution

The depths of Internet morality have been reached by one supplier of 'e-mail cloaking' software called *MaxxAnon*, which is claimed to send out thousands of anonymous e-mails on your behalf, protecting you from flames, disconnection and mailbombs. They waffle on about the right to free electronic commerce without hassle from netcops and 'postmaster deadbeats'.

If you'd like to express your appreciation of their software by e-mailing them the odd coredump, I'll pass on the address to you privately.

WebMasters need WebMaster™

Innovative Media Solutions have announced *WebMaster™*, their comprehensive Web site editor. By using a 'site file' to contain all the components, during editing the package automatically keeps all links up-to-date and maintains consistency between pages. Named colours are used with a DTP-style visual page layout editor and tool bar. Other features include an imagemap editor, modem speed preview and export of the whole site to your ISP with one click of the 'Publish' button. *WebMaster™* will cost £99 + VAT or £89 + VAT with Clan membership discount.

IMS Ltd
Tel: (01934) 522880
sales@ims-bristol.co.uk

Showing your true colours

GIF images created for Web pages with RISC OS applications may display wonderfully on Acorn machines but can end up looking quite disappointing when viewed by PC browsers. *Netscape* can sometimes dither colours which were nice and solid in RISC OS to a rather nasty dotted texture.

It's all down to the palette of colours that the browser program uses to render the GIF images, and the RISC OS desktop's palette is not the same as the *Netscape* one, which can itself vary between platforms. One way of making your images look acceptable is by using a program such as *Photodesk* to design the images in full 24-bit depth, then convert the image mode to Indexed, using a *NetScape* palette file. For an image of the 216 colour '*Netscape Safe*' palette look at: <http://www.lynda.com/hexh.html> which shows the hex values of the colours too.

The other – and amazingly – free solution is to visit *GIF Wizard* on the Raspberry Hill Web site. You can enter the URL of a page on your Web site, and *GIF Wizard* will show various versions of your GIF images converted to different palettes and numbers of colours. Just save-to-disc whichever version you like from the browser window. For the best indication though, you might need to actually do this using *Netscape* – eek!

I sent the Arcade BBS logo GIF image made with *!Draw* and *!Paint* to *GIF Wizard*, and its best offer was 9 per cent smaller and virtually indistinguishable from the original GIF conversion as viewed by *Fresco*. More complex images would probably receive much larger size reductions. You can try it by going to <http://www.raspberrylhill.com/gifwizard.html> and clicking on the Union Jack.

Contacting me

You can contact me, David Dade, at the usual *Acorn User* address and please keep sending me interesting URLs for the next *youR List* by e-mail to david@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181-654 2212.



public domain

Demo special

There's enough demo news this month for a PD page demo special, and that's a great sign for the future of demos, games and computer graphics on the Acorn. Several of the key groups on the scene are putting in a lot of work to bring us new demos – with several interesting releases just around the corner. Demo parties are thriving as this interest picks up and, with Acorn themselves supporting events like Revelation 97, things are really taking off.

Demo scene beginners

For the complete beginner, here's an introduction to the demo scene. Demos can take many shapes and forms but are usually a combination of programming, graphics and music that produce a running demonstration on your computer. A bit like a short film on Channel 4, but with more of a special effects kind of feel.

What's the point? On the face of it, none. The authors make no money from them and the finished product does nothing useful. Yet demos remain a very popular part of the PD scene. For the coders it's an opportunity to show off their programming and design skills, and it's a real buzz to release demos and compete with other crews for fame.

Many people are content simply to collect and watch demos and marvel at the amazing feats of computer graphics they achieve. Most computer owners are interested in having some dazzling graphics with which to show off their computers – demos are the perfect tool for this.

How to get involved? Producing a demo takes time and practice. You need knowledge of programming (usually assembler), design, graphics and musical composition. For obvious reasons, the best demos are produced by teams or crews who have people with these skills. If this sounds too much of a challenge individually, you could always

try joining an existing group, or just find out more about the existing scene.

The Internet is an ideal way to do this, with the Acorn Demo site being a good starting point. Run by one of the best coders on the scene, Frederic Elisei, the site hosts the home pages of several groups and has links to the most recent releases. More in-depth information and the essential demo charts can be found in the *Coders Revenge* disc mag (mentioned elsewhere on these pages). The chart shows the votes on the best demos, coders and musicians on the scene. The Acorn Demo site can be found at: <http://sidonie.imag.fr/AcornDemos/>

To catch up on some of the past releases from the Acorn scene, you'll need to check out one of the large Internet software sites like the Stuttgart ftp server or a PD library. The Datafile has an impressive range, with some of my favourites like *FunkyDemo* and *Armaxess's RiscDream Megademo*.

The important thing is to get involved and help the scene to grow. A strong demo scene trains the coders who will be writing the commercial games of the future.

Coders Revenge

The second *Coders Revenge* disc magazine of '97 has just been released, with news of a complete re-design and re-launch for the next issue. It's short of many of the usual demo coding articles, but there's plenty of scene news as always. *Coders Revenge* is maintaining its place as the scene guide on the Acorn and with the promised continued development by editing group, Icebird, it should stay that way.

These guys are doing a lot to help the Acorn scene, so please help them out by writing articles and filling in vote sheets. It's interesting to see AU moving up the magazine charts to second place. All this scene news on the PD pages must be doing

some good at last... *Coders Revenge* can be found in the direct download area of the Acorn Demo site on the Web.

IceBird

As has been mentioned in previous issues, well-known demo group the Archiologies have been disbanded, with several of the key members leaving to join Icebird. As well as the group's disc magazine, *Coders Revenge*, the group has a lot of software under development and full details can be found on the new Icebird demo pages.

Among the highlights are the group's second place *Reisnac* entry in the Siliconvention party which will be released very shortly and a demo orientated graphics package called *Icepaint*. The Icebird Web pages can be found at: <http://www.germany.net/teilnehmer/100,160485/index.html>

Siliconvention

Early rumours on the Net suggest that *The Xperience* won the demo competition with Icebird's *Reisnac* entry in second place and Frank Foehl in third. The first and second place entries will be on public release very soon. Expect a full report next issue.

Quantum

The UK demo group Quantum are reforming with some new and old faces under a different name and will be releasing their first demo under this new guise at Revelation '97. As mentioned last month the QTM music player is still being developed and the group are looking to move into the field of 3D games as well as the usual demos. More news soon.

Party news

The next big event will be Revelation '97 taking place on July 5th at Welwyn Garden City (see ad). If you're at all interested in

computer graphics, come on down and enjoy the show. I'll be there helping out on both the *Acorn User* and *Revelation* stands. You don't have to be an expert to join in with the competition voting.

Following last year's Yelling Jam party, InterJam '97 is the main event of this autumn. Having merged with Intercon, this will be a big event taking place at Karlsruhe in Germany. Further information including the official party announcement will be in AU as soon as the details have been finalised.

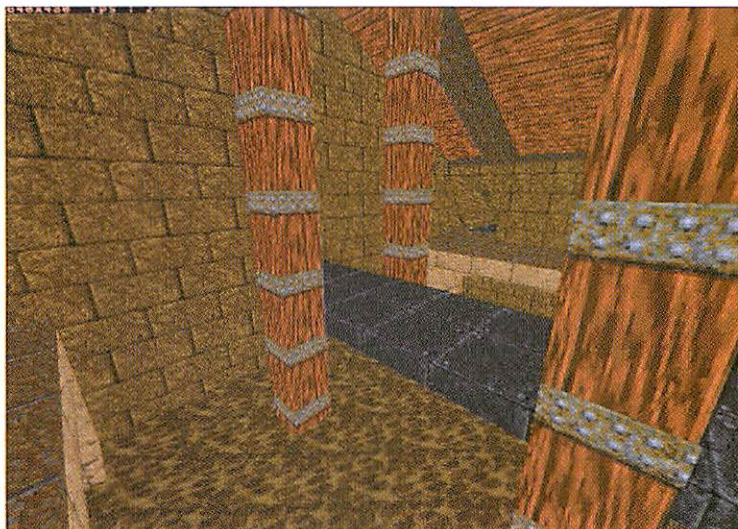
Dignity

Long time PD column readers will remember a rather interesting 3D game from a few years back called *Magnetoids*. Written for ARM2 machines, it wasn't bad for its day, but author Frank Foehl has been hard at work on something altogether better. *Iron Dignity* is a running demo of Frank's new game, and it represents the first real release of a whole new level of computer graphics on Acorn machines.

Dignity runs a sequence of 3D animation that's been put together superbly. I normally find myself having to criticise jerky movement or bad design in these PD page demo reviews, but there's no way I can fault *Dignity*. The design of the 3D shapes is good, and the backgrounds and sky are perfect.

The demo flies you around an alien world, populated with mechanical walkers looking suspiciously like they've been stolen from the Empire, and space ships with quite a Babylon 5 feel. That's not to put down the designs, as they really look great!

From a technical point of view, all the key features are here. Gourard shading, texture mapping, light sourcing and depth shading to fade shapes into the background are all present. The mountainous parts of the landscape appear to incorporate a lot of polygon detail and views to the distance show a good level of realism. One particular shot shows a lake in the distance that looks very real. Something hard to do without slowing down the frame rate unnecessarily.



A screenshot from the FQuake demo

There are also some well implemented lens flare effects – the first time it's been done properly on the Acorn. Lens flares are the dazzling pools of light you see on TV when someone points a camera at a light source like the sun. Although directors try to avoid this artificial effect, demo coders do their best to create it artificially – when done properly it looks fantastic. At several points in the demo, lens flare is used to great effect, either in a fairly reserved manner around the engine exhausts of a space ship or as dazzling laser fire.

The demo uses the 480 x 352 resolution which is a good compromise between the blocky mode 13 and the speed sapping VGA, and at 24-bit the shading is very smooth.

The only problem, if you can call it that, is that you need an impressive machine to run it. On my RPC700 it lumbers along at only two frames a second, so a StrongARM is necessary to get the proper demo speed. Many people will complain that so much attention is directed to something aimed at such a small range of StrongARM owners, but nothing of this quality could be done on previous machines. Computer graphics of this quality make SA an essential item for any RPC owner.

Frank is still developing the code which will become his next commercial game. *Iron Dignity* really is at Playstation level, and that's a great sign for the future of the Acorn scene. *Dignity* can be found on the Acorn Demo site on the Web and at Five Star PD library on disc D79 which is a three disc pack with *Fast Quake*.

DFI

DFI have been hard at work on their entry for the *Revelation* demo party competition and some early

screen shots look quite promising. The demo is likely to feature some reflective water effects and at least five sections. Competition should be hot

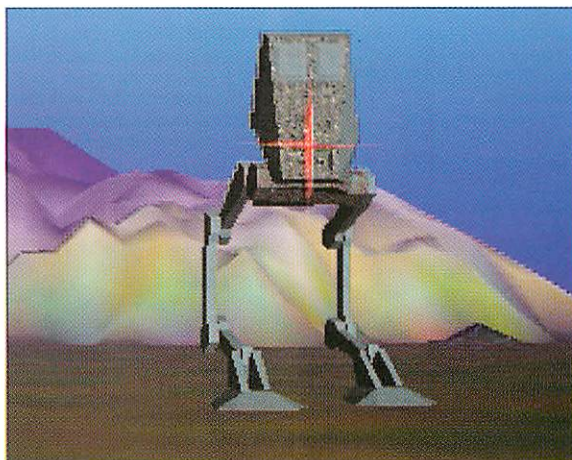
for Acorn's Digital Camera prize. Interest in the party has been quite high all round so it should be a great day. Let's hope some UK groups can win back some glory from all the French and German demos seen in recent months.

FQuake

With 'proper' Acorn versions of *Quake* and *Doom* kicking around on the Net, Jan Vlietinck has produced a demo of his own *Quake* engine based entirely on his own code. It's optimised for the StrongARM on which it achieves an impressive frame rate at high resolution, but so far it doesn't include the lighting effects that give the original *Id* games their spooky atmosphere. Jan hopes to develop this demo of his engine into a complete game. *FQuake* is available from the Acorn Demo server.

Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail to aupdpag@idg.co.uk.



Iron Dignity: a demo with a future

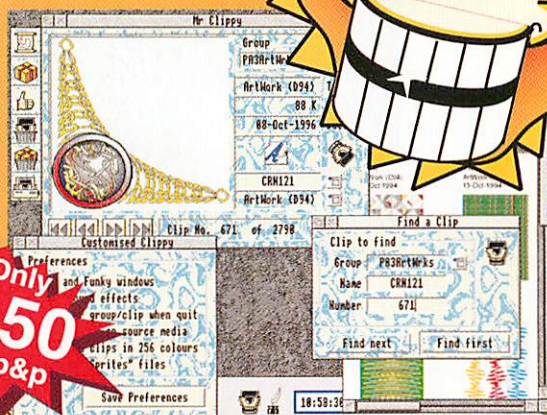
NEW FROM iSV PRODUCTS 3 GREAT NEW PRODUCTS OH NO...IT'S MR CLIPPY!

Mr Clippy is designed to store all your clip art in one easy to use application.

- Handles Draw, ArtWorks, Sprites, JPEGs, TIFF, GIF and Windows Bitmap files.
- Import as a Sprite, export as Thumbnail, Sprite or JPEG files.
- Handles CD's and clips stored in Archives.
- Store clips inside Mr Clippy or leave them on the source media.
- View clips 1 at a time, or on preview pages.
- Simple "tape recorder" style controls.
- Supports multiple clips with the same name.
- Displays large size thumbnails complete with the clips size, date etc.
- Able to handle over 1/2 million clips in up to 77 named groups.
- Prints out thumbnail sheets in mono or in full colour.

- Locate clips by name, partial name or from a clip menu.
- Easily flips between groups and clips.
- Remembers which clip and group you were last looking at when he is quit.
- The only clip art manager recommended by Smart DTP the authors of PublishART.

Mr Clippy requires Risc Os 3.1 or later, a hard disk and 1Mb of RAM (2Mb recommended). Mr Clippy uses !ChangeFSI for some image processing.



For Only
£21.50
inc UK p&p

Stitch II

The latest version of our acclaimed cross stitch design package. New features for version 2 include:

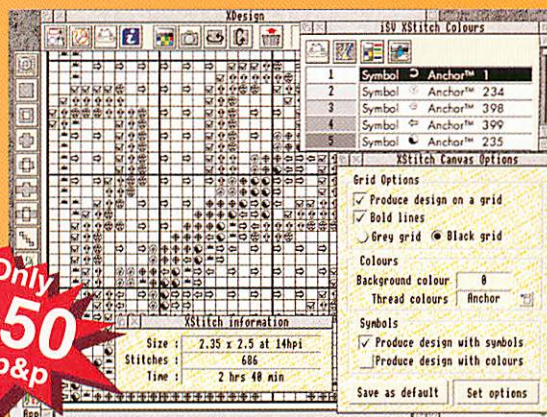
- Support for DMC thread colours.
- Quicker chart generation.
- Scale sprites to fit the canvas size.
- Importation of JPEG, GIF, TIFF files.
- Make canvases from scratch.
- Save out designs in XSCanvas format so they can be edited later.
- Full canvas editing and drawing tools, including boxes, lines, circles etc.
- Undo option to recover from mistakes.
- Copy sections of the canvas around.
- Flip both vertically and horizontally.
- New on screen colour manual.
- New minimise colour option so that only the colours used in the design are shown.

- All features are available from easy to use button/tool bars.
- OLE sprite editing using !Paint.
- Print out designs and reference charts.
- Scale printed design size in units of 5% to save wasting paper.

XStitch2 requires Risc Os 3.1 or later, a hard disk and 1Mb of RAM (2Mb recommended). XStitch2 uses !ChangeFSI for some image processing.

Upgrade from XStitch V1 is £16.50, please return your master disk with your order.

Anchor™ DMC



For Only
£36.50
inc UK p&p

VIVID 7000

VIVID 7000, developed with the assistance of Acorn Risc Technologies is designed to improve the graphical capability of an A7000/Risc PC computer with no VRAM and an Acorn AKF50 or equivalent monitor.

- up to 1024 x 768 in 256 colours.
- Up to 736 x 536 in 32,000 colours.
- Use 16 million colours on screen for the first time on an A7000.
- Rectangular pixel modes up to 1024 x 768 in 32,000 colours.
- Rectangular pixel modes up to 1472x1070 in 256 colours.
- Special Replay mode to allow flicker free smooth replay files to be played.

The graphics enhancer for A7000 & Risc PC computers with no Vram and a 14" Multi-Sync monitor

- Non letterbox versions of old type screen modes such as modes 12 and 15.
- Interfaces with the Acorn Display Manager
- Easy to use automatic installer.
- Improved frame rates for a more stable picture that fits the monitor better.
- Adds almost 100 extra screen modes.

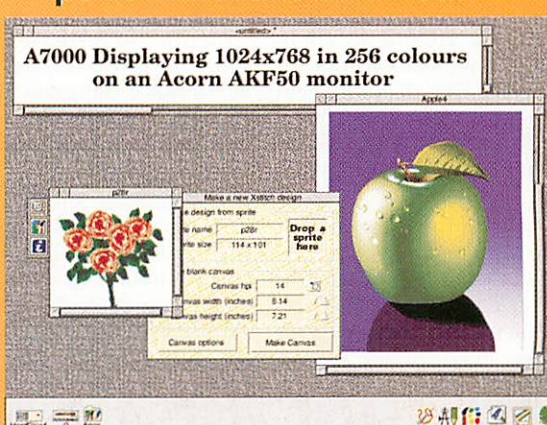
For Only
£11.50
inc UK p&p

Also Available from iSV

Blackletter Font Pack - £16.50
Over 200 gothic style fonts
ClassDesks - £31.50
The protected desktop for schools
Font Designers Toolkit - £31.50
All you need to edit fonts
Font Trix PRO - £16.50
Make real fonts easily & quickly
InFormED - £26.50
On screen manual editor & designer

Report Generator - £21.50
Produce complex reports quickly and easily
SerialNET - £21.50 (excluding cable)
Home network and printer sharer
TableCalc - £21.50
Award winning spreadsheet generator
Typography - £46.50
The Font CD for Risc OS
VIVID Graphics Enhancers - from £11.50
Available for all pre RiscPC computers

Give your A7000 similar graphic performance to an A7000+!



Overseas orders please add £2.00 carriage

iSV Products

86 Turnberry • Home Farm
Bracknell • Berks • RG12 8ZH
Tel 01344 55769

This advert was produced using NDT fonts stored on the Typography CD & DrawWorks2

All details correct at the time of going to press E&OE
NDT & Typography are trademarks of iSV Products. All other trademarks are acknowledged

iSV
Best
Sellers

Draw Works 2
"Order it now, I guarantee you won't be disappointed!"
Archive
£21.50

Report Generator
"...difficult to separate from the competition, the difference is that it is about half the price!"
Acorn User
£21.50 single user
£41.50 site licence

SerialNET
"...half the price and four times the speed..."
Archive
£21.50 no cable
£36.50 inc cable

Typography Font CD
"...good quality fonts...excellent value for money..."
Archimedes World
£46.50
or
£36.50 when you Return any other Acorn Font CD with your order.



Made-to-measure or off-the-peg?

Software can generally be divided into two distinct categories – bespoke or off-the-shelf. I would encourage business and other users to attempt to solve their computing problems via the latter, if possible. It will nearly always be cheaper – having specific software written can be very expensive. Development costs are among the highest in the production of new applications.

That being said it can also be very expensive trying to make a general-purpose package perform a task to which it is not suited or of which it is not capable – this is often expressed in the hours wasted in such effort. However, as with most things computing, there is a middle way – vertical software.

Vertical software is usually highly specialised and specific to either one task or a particular industry. You may remember I featured *Counter Care* from Counter Care Partnership some months ago – a system specifically for pharmacists dispensing over-the-counter medicines. Another producer of specialist software systems is Siren Software Systems who produce a number of vertical solutions – one of which is their *Neos* system.

Neos is a time and attendance system which can be tailored for individual clients who need a method of tracking the movements of workers and visitors to and from a site. The system, which was originally implemented on a Risc PC 700, brings many benefits including more accurate payroll, better record keeping, access control and site security. One of the greatest benefits is a real-time head count in the case of fire or emergency.

The project began as a piece of bespoke software for an international packaging manufacturer and is now available to other companies who require a similar solution. The software will need adapting to a specific need or site but is still better than starting from scratch and likely to be less expensive.

Interestingly one of the main reasons Andrew Pike of Siren used the Acorn platform, apart from its general excellence, was that RISC OS is not susceptible to the Millennium Bug – important for a solution which makes so much use of time

and dates. The year 2000 presents no problems for Acorn users. This is a particular hobby horse of mine – shout the advantages of the Arc often and loud enough and someone, somewhere, will listen and realise there is a viable alternative.

On the technical side *Neos* can cope with 9,999 employees in 99 departments working 99 shifts. The internal calendar is however limited to the year 2247.

As with all good software *Neos* is modular in design and comprises nine main modules. The attendance is indicated by the swiping of a bar code and a voice response to the user. Bar codes have many advantages over magnetic stripe technology, particularly in industrial settings – hence their more widespread use. The swipe card also doubles as an ID card, further enhancing security.

Siren have also developed a low-cost digital photography pack called *Imagio*. This can be used to produce photographic images for inclusion on the bar code/security card.

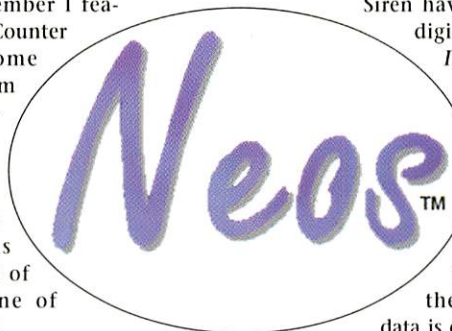
Bar codes are highly reliable as are their readers. The bar code reader is connected to the Risc PC via the RS-232 serial post and the data is checked for errors by the software before being logged by other *Neos* modules.

The use of the voice module gives a more user-friendly and wider range of responses than a flashing light or beep.

Siren have also produced a cut-down version of *Neos* called *Neos LITE* which provides an electronic registration system for security conscious schools and colleges. This has many of the best features of its big brother but without the !Overtime, !Rota and hours worked modules. Most similar schemes I have seen for schools and colleges have been very expensive both to set up and operate.

Contact Siren Software on: Tel/fax 0121-459 3333, e-mail sirensoft@argonet.co.uk or visit their Web site at <http://www.siren.uk.com/siren/>

● *Once again it is good to see innovative software and hardware solutions being implemented on the Acorn platform. If you are doing anything similarly innovative and wish to see it featured on this page let me know.*



New phone number

A number of readers have had difficulty making contact with ACP Ltd, the company who market *PlanING* and *ProjectING*. I am informed that it is easier to contact Paul Johnston of Meadow Computers on (01256) 892008 for details of these programs. As a special offer to readers of this page they are offering special prices of £39 + VAT for *PlanING* and £99 + VAT for *ProjectING*. These are non-StrongARM compatible programs.

Rumour mill

I have heard a strong rumour that talks are taking place between Apricote Studios, makers of *Prophet 3* and Raspssoft, makers of *!HardCash*. The aim is to make the file types compatible so that they can accept data from each other. This would certainly simplify the accounting/payroll side of any business.

Apricote Studios Tel: (01354) 680432

Raspssoft Tel: (01274) 671922

More accounting

Circle Software, the producers of *Impact* currently the only relational database for the Arc, have branched out with a new program. *Easy Money* offers full financial accounting facilities, suitable for the home or small business. It also provides everything from petty cash to profit and loss reports. Although I have not seen it yet I hope to be able to bring a full review in a future issue. The price is £58.75 including VAT.

Circle Software

Tel: (01208) 850790

E-mail: sales@circlesw.demon.co.uk

Contacting me

You can contact me, Mike Tomkinson, by post at the usual Acorn User address or by dropping me an e-mail at: aubizniz@idg.co.uk

Good reads

Mark Twain said that the man who can read but does not has no advantage over the man who cannot read. In an attempt to give you back the advantage, I'd like to recommend a couple of good books particularly with the holiday season drawing near. The first is *The Cuckoo's*

Egg by Clifford Stoll (Published by Pan at £6.99 ISBN 0-330-31742-3). It deals broadly with the subject of computer security and, despite a somewhat annoying American style, is an interesting tale of one man versus a hacker.

A somewhat weightier read is

Why Things Bite Back by Edward Tenner (Published by Fourth Estate at £18.99 ISBN 1-85702-476-1). It deals with the down side to the introduction of new technology and its revenge effect. Computers are just one of many targets but the basic premise gives food for thought.

Computers

StrongARM Risc-PC 200MHz

Fab Four Promo

Offer 1 Software (Choice of Two)
Family Pack
 DK Ultimate Human Body & IMS Reader
 + Multimedia Textbase + Artworks
Business Pack
 Eureka 3 + DataPower + EasyWriter Pro.
Offer 2 Monitor
 17" Fine Grain SVGA Multiscan (AKF93)
 for the price of
 14" Fine Grain Multiscan ES (AKF60)
Offer 3 Printer
 Canon Bubblejet Colour Printer BJC-4100
Offer 4 Camera
 QV10A Casio Digital Camera + Serial Link
 + Photo QV Software & Guide

offer open while stocks last
 Running from June 2nd - August 29th 1997
 Options available only with the purchase of
 a StrongARM Risc PC

4/HD1.2Gig base only £1150.00e
 4/HD1.2Gig 8xCD base only £1200.00e
 10/HD1.2Gig base only £1450.00e
 10/HD1.2Gig 8xCD base only £1500.00e

A7000+

(1.6 Floppy 8 Mb EDO expandable to 136Mb
 Arm 7500E 1.2Gb HD, 1yr on site warranty)

8M/HD1.2Gb base only £834.00d
 8M/HD1.2Gb/8xCD base only £934.00d

*Simply select your preferred computer base, then
 add options from list below, eg Monitor, PC card
 All Computers are built and tested before
 dispatch, with printers and software purchased,
 installed as required at no additional cost*

Monitors

Acorn AKF60	£264.00d
Acorn AKF91	£640.00d
Acorn AKF93	£423.00d
Iiyama 17"MF8617E 26dot	£599.00d
Iiyama 17"MT9017E 25dot	£639.00d
Microv 14"1438 (AKF50)	£289.00d
Microv 14"1450 (AKF60)	£219.00d
Microv 15"1565 28dot	£299.00d

Risc-PC Upgrades

486-DX2-66 PC Upgrade	£175.00d
486-DX4-100 PC Upgrade	£230.00d
586-100 PC Upgrade	£350.00d
PC Exchange	£29.00d
Access- Card	£139.00d
Strong Arm upgrade	£292.00d
Audio Mixer	£40.00a
Movie Magic	£279.00d
Second Slice <i>no PSU</i>	£90.00d
Sound Card	£69.00d
RiscPC 8Mb RAM	£45.00b
RiscPC 16Mb RAM	£79.00b
RiscPC 32Mb RAM	£159.00b
RiscPC 64Mb RAM	£479.00b
RiscPC 1Mb VRAMsimtec	£81.00c
RiscPC 2Mb VRAMsimtec	£116.00c

Portable Computers

A4 Portable (Last 2)	£1350.00d
Pocket Book 2(256k)	£239.00d
Pocket Book 2(1Mb)	£319.00d
A-Link	£59.00b
M-Link	£59.00b
PC-Link +	£59.00b
Parallel Link	£29.00a
Power Supply	£14.50b
Flash SSD 1MB	£119.00c

Hardware Upgrades

Casio QV-10a inc. Software & link	£375.00d
Casio QV-100 inc. Software & link	£525.00d
Casio QV-Mains Adaptor	£15.00a
Casio QV-10a/100 Con.Kit	£116.00c
Hawk V9 MkII	£194.00d
Lark Midi Sound-Sa.	£172.00c
Midi Max	£78.00c
Risc OS Upgrade Chips	£36.00a
RiscTV (Irlam)	£295.00c
Teletext module for above	£45.00a
SCSI 16bit	£95.00c
SCSI 2 32bit	£205.00c
TV Tuner	£99.00c
TV Tuner + Teletext	£159.00c

Data Storage

A300 Quad CD Atapi interface	£84.00b
Quad External Atapi CD	£176.00c
A300 IDE interface	£88.00b
A300 IDE/CD interface	£104.00b
<i>all above include HD fixing kit</i>	
IDE 2.5"	
60mb	£69.00c
350mb	£129.00c
540mb	£169.00c
EIDE 3.5"	
1.2 gb 1yr Warranty	£169.00c
1.7 gb 2yr Warranty	£199.00c
2.1 gb 3yr Warranty	£219.00c
2.5 gb 5yr Warranty	£239.00c
3.2 gb 5yr Warranty	£289.00c
SCSI 2.5"	
544 Meg Fujitsu	£119.00c
1.0 gb 1yr Warranty	£209.00c
2.0 gb 2yr Warranty	£299.00c
3.2 gb 3yr Warranty	£359.00c
4.3 gb 5yr Warranty	£649.00c
SCSI PD System (comprising)	
4 speed CD / 650mb Optical Disc	£29.00c
Internal or External + 1 Disc	£539.00c
Extra 650 mb Cartridge	£45.00a
IDE CD Tray Internal	
4 speed	£69.00c
8 speed	£89.00c
12 speed	£119.00c
Parallel Port	
Zip Drives 100mb	£175.00c
Zip Discs 100mb	£13.50a

Mail Order

Tel: 01924 254800 Fax: 01924 258036
 E-Mail: sales@davyn.demon.co.uk

Archimedes Memory

A3000 1-2mb	£64.00b
A3000 1-4mb	£139.00c
A3010 1-2mb	£47.00b
A3010 2-4mb	£89.00b
A3020 / A4000 2-4mb	£89.00b
A5000 2-4mb	£99.00b

*All Upgrades fitted free if ordered
 with Computer else £18.00*

Scanners

Epson GT5000 parallel	£359.00d
Epson GT5000 scsi	£429.00d
Epson GT8500 para/scsi	£499.00d
Epson GT9500 para/scsi	£659.00d
Scanlight 256 8bit	£164.00c
Scanlight 256 16bit	£151.00c
Scanlight 256 Video	£222.00c
Image Master/Twain Driver	£35.00a

Printers

Canon		
BJ-30	(black)	£169.00d
BJ-70	(colour)	£199.00d
BJC-240	(colour)	£179.00d
BJC-4200	(colour)	£229.00d
BJC-4550	(A3 colour)	£389.00d
BJC-620	(colour)	£339.00d
Epson		
Stylus 400	(colour)	£239.00d
Stylus 600	(colour)	£299.00d
Stylus 800	(colour)	£449.00d
Stylus Pro	(colour)	£419.00d
Stylus ProXL+(A3colour)		£1119.00d
Hewlett Packard		
DeskJet 400	(colour)	£159.00d
DeskJet 690	(colour)	£259.00d
LaserJet 5L	(Black)	£349.00d
Calligraph		
A4 1200 Laser	(black)	£1150.00d

Printer Inks/Refills

COLOURS AVAILABLE FROM PREMIER INKS

Inkjet Refills are an economical way
 of re-charging your existing cartridge
 All inks come complete with gloves,
 syringe and easy to use instructions.
 Single 20ml Any Colour £6.70a
 Twin 2x20ml Black £10.00a
 Bulk 125ml Any Colour £21.00b

Printable Items

Colour'n Wear (2 white Baseball Caps + 3 transfer papers)	£10.50b
Colour'n Wear (2 white T Shirts + 4 transfer papers)	£13.50b
Colour'n Wear (4 transfer papers only)	£7.50a
(30 transfer papers only)	£41.00b
Design & Print Mouse Mat	£4.00a
Design & Print Business Cards	£5.00a
10x8 A4 150g Perforated	£5.00a
Col InkJet mat photo white paper	£5.50b
25 sheets x 120gms	£5.50b
Monochrome Inkjet brilliant white paper 100 sheets x 90gms	£3.00b

CD Software

100 Classic Cars (Photo CD)	£16.00a
Ancient Lands (IMS)	£44.00b
ArtWorks (CC)	£99.00c
ArtWorks Clipart I (CC)	£20.00a
ArtWorks Clipart II (CC)	£20.00a
Being a Scientist (Anglia)	£44.00a
Bitfolio Ed7 (Lino)	£50.00c
Breakaway Maths (YITM)	£70.00b
Britain from the Air	£44.00a
Britain Since 1930	£28.00a
British Birds age 7-12	£109.00c
Cars-Maths in Motion(Cams)	£105.00c
Dinosaurs (M/S)	£44.00b
Castles (Anglia)	£44.00a
Guardians of the Greenwood	£54.00a
Granny's Garden (4Mat)	£35.00a
Garden Wildlife (Anglia)	£44.00a
Hutchinson M/Media	£45.00a
Industrial Revolution (Anglia)	£94.00c
Inventors&Inventions (Anglia)	£164.00c
Kingfisher Childrens Micromedia 96	£65.00b
Kiyeko and the lost night (IMS)	£34.00a
Langdale (CCS)	£104.00c
Medieval Realms 1066-1500	£164.00c
Musical Instruments (M/S)	£44.00b
Mysteries of Nature (Anglia)	TBA
My 1st incredible amazing dictionary	£36.00d
Naughty Stories V1&2 (Sher)	£93.00c
PB Bear's Birthday Party(IMS)	£36.00b
PhotoBase 1920s,30s,40s,50s,60s	
Victorians, Landscapes Each(LL)	£54.00a

DAVYN

CENTRES OF TECHNOLOGY

Finance

Clearly the Best Choice

(based on 20% deposit and 0% finance
 over 20 month period)(Acorn Items Only)

200%

Personal finance is available to qualifying
 purchases. Credit subject to status.
 Written quotation on request.

APR 0%

Acorn Net Station

World Wide Web

£468.00d

RiscDisc 1 (Uniqueway)	£15.00a
RiscDisc 2 (Uniqueway)	£18.00a
RiscDisc 3 (Uniqueway)	£22.00a
Seashore Life (7-11)	£44.00a
The Way Things Work (IMS)	£44.00b
Ultimate Human Body (IMS)	£44.00b
Understanding Energy	£53.00a
Understanding the Body	£44.00a
World War 2	£28.00a

Application Software

Advance (Acorn)	£116.00c
Advantage (LL)	£54.00a
Ancestry II (Minerva)	£87.00b
ANT internet (ANT)	£109.00b
Apple FS (Sah)	£30.00a
Arefax (David P)	£33.00a
Armadus (Sah)	£25.00a
ArtWorks (CC)	£99.00c
C++ (Acorn)	£249.00c
Card Shop (Clares)	£22.00a
Celebration (Clares)	£32.00a
The Comp. Animator (Iota)	£93.00b
Composition (Clares)	£150.00c
Compression (CC)	£31.00a
DataPower (Iota)	£135.00c
Desktop Thesaurus (R Dev)	£19.00a
Draw to DXF convert (Davyn)	£23.00a
Draw Works 2 (iSV)	£19.00a
Easy Clip (Fabis)	£31.00a
Easy Font 3 (Fabis)	£31.00a
Eidoscope (RiscPC only) (CC)	£170.00b
Eureka 3 (LL)	£99.00c
Formulix (CC)	£70.00a
Font FX (Datastore)	£12.00a
Frame-It 1 or 2 (Davyn)each	£6.00a
<i>Publisher irregular frames</i>	
Graphics Loaders (CC)	£44.00a
Illusionist (Clares)	£45.00a
Image FS 2 (Alternative P)	£41.00a
Image Outliner (Iota)	£54.00a
Impression Publisher (CC)	£139.00c
Impression Style (CC)	£79.00c
Intertalk (Acorn)	£92.00c
Investigator III (Vii)	£45.00a
Knowledge Organiser 2(Clare)	£72.00a
Notate (LL)	£62.00b
PC PRO (inc PC exch) (ANT)	£45.00a
PC Sound Pro (RComp)	£29.00a
Pendown DTP (LL)	£59.00b
Pendown Etoiles (LL)	£58.00c
Pendown Plus (LL)	£83.00c
Personal Accounts (Apricote)	£40.00b
PhotoDesk 2 (Space Tech)	£259.00c
Pinpoint (Longman)	£104.00c
Prime Mover (Sah) (Minerva)	£30.00a
Pro Artisan 2 (Clares)	£135.00c
Pro Artisan 24 (Clares)	£99.00c
Prophet 3 Accounts (Apricote)	£163.00c
Render Bender v2 (Clares)	£45.00a
Replay Starter Kit (Acorn)	£40.00b
Revelation ImagePro (LL)	£163.00c
Rhapsody 3 (Clares)	£93.00a
Rhythm Bed (Clares)	£45.00a

RiscCad Professional

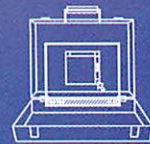
Single User (Davyn)	£250.00c
Education (Davyn)	£200.00c
Site Licence (Davyn)	£581.62c
Serenade (Clares)	£93.00a
ShapeFX (Datastore)	£12.00a
Sibelius 6 (v3) (Sibe)	£179.00c
Sibelius 7 Prof. (v3) (Sibe)	£899.00d
Sibelius 7 Student (v3) (Sibe)	£499.00d
Sibelius Junior (Sibe)	£53.00b
SmArt (4Mation)	£37.00a

SmArt Files (4Mation)each	£17.00a
SmArt File Mod.Lang.(4Mation)	£21.00a
Snippet (4Mation)	£38.00a
Sound FX Maker (CIS)	£39.00a
Strongard (Arm)	£25.00a
Termite Internet (DoggySoft)	£89.00c
TextEase (SoftEase)	£54.00a
TextEase Talking (SoftEase)	£74.00a
TextEase Talking Multimedia	£94.00c
TimeCode (Acorn)	£29.00a
Titler (Clares)	£93.00a
Topographer (Clares)	£73.00a
Touch Type (Iota)	£45.00b
Turbo Driver (CC)	£51.00b
Twain Drivers (DP)	£19.00a

Education Software

10 out of 10 Full Range Each	£14.00a
Dinosaurs, Driving Test, Early Essential, English, Ess. Maths, Ess. Science, Ess. IT, French, German, Jr. Essentials, Math Algebra, Math Geometry, Maths Number, Math Statistics, Stunt. Spelling.	
Adventure Playground (Storm)	£21.00a
Amazing Maths (CSH)	£23.00a
Amazing Ollie (Storm)	£15.00a
Arventure I Romans (Sher)	£38.00a
Arventure II Egyptians (Sher)	£38.00a
Arventure III Vikings (Sher)	£38.00a
Arventure IV A Saxons (Sher)	£38.00a
Around World 80 Days (Sher)	£49.00a
Aztec (Sher)	£48.00a
Badger Trails (Sher)	£48.00b
Balloons and Zoo (Topo)	£21.00a
Body Wise (Sher)	£48.00a
Calabash Pirates (Storm)	£25.00a
Coffee (Storm)	£29.00a
Connections (Sher)	£34.00a
Crystal Rain Forrest (Sher)	£48.00a
Crystal Rain Forrest II (Sher)	£48.00a
Darryl the Dragon (4Mat)	£21.00a
DataGraph (Topo)	£30.00a
First Logo (LL)	£25.00a
First Page DTP (LL)	£53.00a
Flossy The Frog (4Mat)	£26.00a
Flight Path 9+ (Storm)	£31.00a
Freddy Teddy (Topo)	£15.00a
Freddy Teddy's Adv (Topo)	£15.00a
Fun School 3/4 (5.5-7.7+) each	£20.00a
<i>(Please Specify age group)</i>	
Gnatty's Garden (4Mat)	£26.00a
Happy Life (CCS)	£31.00c
James Pond running water	£29.00a
Landmarks full range(LL)each	£28.00a
Look Here Talking Topics(Sh)	£61.00b
Maths Circus (4Mat)	£29.00a
MathsMania (Topo)	£26.00a
Music Box (Topo)	£35.00a
Naughty Stories V1 or 2 (Sher)	£58.00b
Number Tiles (Topo)	£25.00a
Ollie Octopus Sk Pad (Storm)	£16.00a
Oxford Reading Tree Stage 2 or 2A or 3	
Talking Stories (Each) (Sher)	£45.00b
Oxford Talking Infant Atlas	£21.00a
PinPoint Junior (LL)	£31.00a
PlantWise (Sher)	£49.00a
Playdays (age 3-8) (Skill)	£22.00a
Polyominoes (Sah)	£25.00c
Podd (ESM)	£15.00a
Rosie & Jim Duck (Sher)	£11.50a
Rosie & Jim Sneezes (Sher)	£11.50a
ScreenTurtle (Topo)	£35.00a
Sea Rescue (Sher)	£29.00a
Selladore Tales (Sher)	£26.00a
Snudge the Spaniel (Storm)	£20.00a
Snudge the Scientist (Storm)	£42.00a
Snudge Punctuates (Storm)	£TBAA
Space City (Sher)	£31.00a
Splash (Sher)	£22.00a
Stig of the Dump (Sher)	£26.00a
Story Stars (Sher)	£26.00a
Talking Clock (Topo)	£35.00a
Talking Animated Alphabet	£32.00a
TalkingRhymes1 (Topo)	£26.00a
The Playground (Topo)	£25.00a
The Puddle & Wardrobe(Topo)	£20.00a
Time Detectives (Sher)	£49.00a
TinyDraw/Logo (Topo)	£25.00a
TinyPuzzle (Topo)	£20.00a
T	

portables



Goings on at Psion

Acorn User presents its definitive guide to all that has taken place at Psion recently:

The Backlit 3c

Psion have at long last solved the age-old problem of being unable to use your computer in dim conditions with the release of a backlit version of the 3c. The backlight can be turned on and off as required using a new keyboard shortcut and will automatically turn off after a set period of time to conserve the battery. The backlit 3c costs £399 and is available now from all Psion dealers.

Psion and Java

Psion Software – the division of Psion responsible for developing and licensing their operating system – have taken out a licence to enable them to include Java support in their new EPOC32 operating system. The new 32-bit OS, due for release this year, is to be included in Psion's next generation organisers and could possibly be running on Digital's StrongARM chip. Psion decided to license Java for two reasons – to provide support for Java applets in their Web browser software and also, perhaps more importantly, to ensure there is a multi-platform development system included in EPOC32 of which Java is fast becoming one of the standards.

Mobile communications

Communication using the Psion 3a/3c and the Acorn PB II has just become substantially faster with the release of two new portable modem solutions – the PC card modem adaptor and the Travel Modem (available only for the 3c).

Three PC card modem adaptors are available; a 3c, a 3a/PBII and a desktop/laptop computer version.

Powered by two AA batteries, it offers up to 5.5 hours of use without affecting the Psion's battery. The adaptor allows the use of a range of standard type II PC modem cards including the Psion Dacom Gold Card and the Hayes Optima to name but just two. The 3c modem reaches speeds of 57,600bps

while the 3a version clocks in at 19,200bps.

The travel modem is a pocket-sized fax and data modem which supports speeds of up to 14,400bps. It is available for the 3c only and is powered by either two AA batteries or by a mains adaptor. Both modems are designed to complement the *PsiFax* and/or *PsiMail* Internet software packages.

The PC card modem is priced at £99.95 while the travel modem costs £199.95 – both should be available by the time you read this.

It's good to communicate...

The BT Mobility Solutions Group and Psion have announced that they are working together to market a new range of telecommunications services. The first service to be marketed is BT's proposed multimedia messaging service which will enable users of Psion organisers to send and receive faxes and e-mails as well as control the routing of their voice and fax calls.

The new service will incorporate BT's new Onenumber personal number service allowing automatic routing of voice calls according to the owner's diary for the day. The capability to store and forward faxes means users can control when and where they receive faxed information.

Financial results

Psion had a very successful 1996 when they unveiled their financial results for the year. Turnover was up by 37 per cent to £124.18m and profit before tax was up by 38 per cent to £16.04m. The group have a gross profit margin of 41 per cent. Highlights of 1996 include the release of the 3c and Sienna and the re-organisation of the group into four divisionalised companies: Psion Computers, Psion Software, Psion Industrial and Psion Dacom. 1997 looks like being an even better year for Psion especially with the forthcoming release of their new 32 bit OS – EPOC32.

Psion PLC

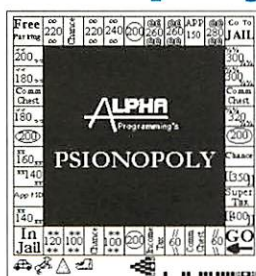
Tel: 0171-262 5580

<http://www.psim.com/>

Proceed to psionopoly

As the name suggests, *Psionopoly* is a version of Monopoly for the Psion 3/Pocket Book II. Unlike the Psion version, it is not an official conversion and perhaps more importantly is freeware whereas the Psion version costs £29.95.

The game implements virtually all the rules of Monopoly and it is possible to configure various aspects of them, for example, whether property is auctioned off if another player doesn't want it and even the design of the board and playing pieces. Another feature which is



Psionopoly in action...

in the board version but not in Psion's version, is that it is possible to cheat while playing the game – assuming of course that you can manage to get away with it...

All in all great fun and as it is freeware should be considered virtually essential for any Psion/Pocket Book owner.

Psionopoly and various board designs are available for download from Alpha Programming's Web site

at <http://www.alphapro.demon.co.uk>

Psion 3c link

In the last column I stated that Acorn would be bringing out a new version of *PocketFS* to cope with the 3c/Sienna's new serial port. This does not now look like being the case, causing us Acorn users a few problems...

If you have a Risc PC you could buy the PC link and run it via the PC card but other Acorn users have no real solution to the problem at the moment. Hopefully, if Xemplar develop a Pocket Book III we might see a new version of *PocketFS* emerge – until then we can only wait and hope...

Ovation Pro RTF update

When I looked at *Ovation Pro*'s ability to import RTF files in a previous column I mentioned a rather annoying problem with the filter missing off the first word of every paragraph. This has now been solved and version 1.81 of the filter is available for download from Beebug's Web site. If you don't have Web access Beebug are including it in the next free update which should have been sent out to all registered users by the time you read this.

Beebug

Tel: (01727) 840303

<http://www.beebug.com/>

Acorn World 1997

This year's Acorn World looks like being a very exciting one from a portable perspective as Acorn hope to release and have on sale their new portable – the Artisan. If the specifications and prices that have been suggested are anywhere near accurate we are in for a real portable treat!

Acorn World

<http://box.argonet.co.uk/acorn-world/>

Contacting me

You can contact the Portables page by writing to me, Mark Taylor at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to aupt@idg.co.uk

The Fastest RiscPC PC Card just got faster!

The 'CJE 133MHz 5x86' with **512K Cache!**

Now Available £ 390 inc VAT Please phone for details.

RiscPC CD Rom Systems

IDE:		SCSI:	
Eight Speed Drive	£ 85	Double Speed Drive - tray	£ 95
Twelve Speed Drive	£ 110	6.7 Speed Drive - tray	£ 170
6Speed 4Disk Autochange	£ 222	Eight Speed Drive - tray	£ 200

For details on drives for other systems, please call

Job Vacancy: Trade Sales
send CV to Mr C Evans

(Please add £ 15 for IDE CD Drivers if using RiscOS 3.5 computer).

Combined Quad Speed SCSI CD Rom Drive AND 650MB Optical Read/Write Drive £ 360*

SCSI I Mini Podule Int. (e.g. A3020)	£ 115
SCSI I Podule Int. (e.g. RiscPC)	£ 90
SCSI II Podule Int. Cumana	£ 180
SCSI II Podule Int. PowerTec	£ 195
Cases for External CD Rom Drives from	£ 47
*Optical Discs for PD Drive	£ 46

0%

RiscPC's from £ 48 p.m.
20% deposit.
20 Months to pay.
Call for further details.



All prices **Include VAT**
@ 17.5%

Call for prices on:

- Interfaces
- Scanners
- Speakers
- Printer Ribbons & Cartridges
- Digital Cameras
- Modems
- Arch. Hardware

and much much more...

... A new WWW site is coming to you soon ... <http://www.cje.co.uk/> ...

RiscPC RAM

4MB	£ 18	128MB NEW	P.O.A.
8MB	£ 35	1MB V-RAM	£ 70
16MB	£ 72	2MB V-RAM	£ 120
32MB	£ 140	1-2MB V-RAM	£ 90
64MB NEW	£ 525	For DRAM Part Exchange prices please Call.	

Monitors

14" SVGA (AKF 60 equiv.)	£ 225
15" Link (0.28mm FST MPC 1280 x 1024)	£ 280
15" Idek (0.28mm FST MPC 1280 x 1024)	£ 300
17" Idek 8617e (0.26mm FST MPC 1600 x 1200)	£ 580
17" Idek 9017e Pro (0.25mm FST MPC 1600 x 1200)	£ 625

Hard Disc Drives

420MB Conner 3.5" IDE	**Special price**	£ 85
1.2GB Quantum Fireball TM 3.5" IDE		£ 140
1.7GB Quantum 3.5" IDE		£ 170
2.5GB Quantum Scirrocco 3.5" IDE		£ 230
3.2GB Quantum Fireball 3.5" IDE NEW		£ 270
3.8GB Quantum Fireball 3.5" IDE		£ 300
2.0GB 3.5" SCSI		£ 325
3.2GB 3.5" SCSI NEW		£ 475
4.3GB 3.5" SCSI		£ 725
Hard Disc Kits for A3000 from (A3020 from £ 90)		£ 175
Syquest EZ230MB 3.5" Drive	Price reduced	£ 220
Xyratex 540MB Drive (removable cartridge)	external	£ 320
Iomega 1GB JAZ Drive (removable cartridge)	from	£ 350

Printers

BJ30 Black	£ 155	BJC620 Colour	£ 320
BJC210 Colour	£ 190	Stylus Colour 500	£ 230
BJC4100 Colour	£ 230	HP5L 4ppm	£ 380

Risc PC's

15" Monitors at 14" Prices

with SRP5/6 RiscPC systems, £20 with SRP10/11.

OR

£ 20 Eight Speed CD Drive

£40 with SRP10/11 (£ 35/£ 55 Extra for TWELVE Speed.)

OR

£ 50 for 15" & 8 Speed CD

£70 with SRP10/11

RiscPC Systems Prices Reduced!

RiscPC's Built to your specification.

Example : RiscPC StrongARM, 586 133/512k, PC Pro
2.1GB H/D, 16MB RAM, 2MB V-RAM, 15" FST Monitor

£ 2200 inc. VAT & Delivery.
For 8 Speed CD Add £50

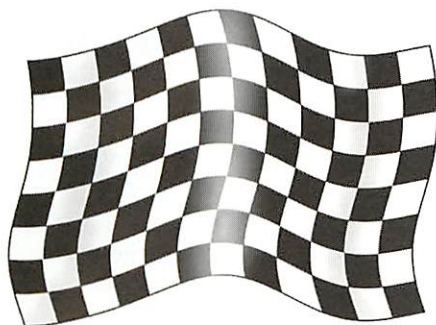
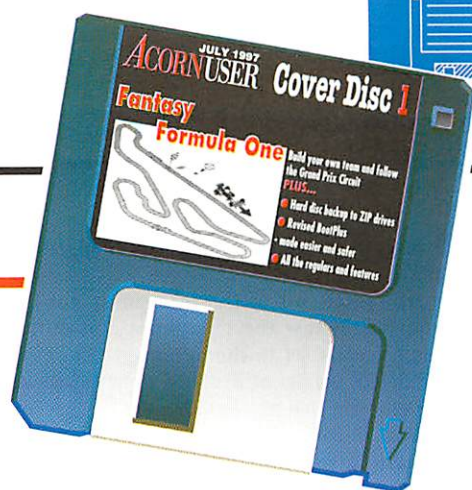
All Prices **Include** VAT @ 17.5%

Post from £ 2.50 Courier from £ 7.00
Credit Cards & Official Orders Welcome.

cover disc

Fantasy Formula One

Steven Hawkins



Based on the same rules and scoring system as the BBC *Top Gear* and *Grand Prix* magazines' Fantasy Formula One game. This program helps you keep track of the points scored by a number of fantasy teams throughout the F1 season. These could be teams you have entered for *Top Gear's* Fantasy F1 game or teams you and friends have picked for a competition between yourselves.

The name of the game is to win the world championship for your team by picking two drivers and two cars from those racing. You can put any drivers in any cars then score points throughout the season based on their performances. But, like the real thing, success is more a matter of skill and expertise than playing safe. You can't just pick the obvious big-money line-up and expect to win - every team has a chance of winning because of the sophisticated scoring and handicapping system.

The rules and points awards are given in the Help file.

Compatibility

This application is only suitable for use with RISC OS 3.10 or later and needs 180K free to run. The following Acorn Toolbox modules are required: Toolbox, Window, Menu, DCS, Iconbar, ProgInfo, FileInfo, SaveAs, PrintDbox, FontDbox and FontMenu.

Setup

Each year, at the beginning of the season, BBC *Top Gear* and *Grand Prix* magazines publish a list of drivers and cars, along with cost of each for the following season. These must be entered into the driver and car database along with details of the circuits

that make up the Formula 1 season. You can then select teams from these drivers and cars.

After each race, enter the starting and finishing grid position of each driver in the main results window. As the results are entered the points scored by the drivers, cars and teams are automatically updated.

Clicking on the iconbar icon with Select opens up the main results window. From there you can access the Team, Circuit, Driver and Car detail windows using either the menu, a control key short cut or by clicking on the relevant icon within the main window. Using adjust to click on one of these icons will close the main results window after the chosen window has been opened. You can reopen the main window by using adjust to close the currently open window, or by clicking on the icon bar icon.

You can step forwards and backwards through the records in any of the windows using either the page up and page down keys or using the adjuster arrows.

Drivers

The drivers window allows you to view/amend details of drivers already entered and to enter details of new drivers.

To enter a new driver, step through to the record number under

which you wish to enter the driver details and indicate

the cost in millions along with forename and surname. Details of a current driver can be changed in the same way. To confirm the information entered click on accept (if you use adjust the window will remain open) or press enter.

Cancel any changes being made to the current driver by clicking on Cancel, but once accepted, the changes cannot be

undone. To delete details of a driver click on Delete. Note: all points scored by the driver will be lost so only those no longer used should be deleted.

The points and statistics will be updated automatically as details of the drivers' results are entered.

Cars

The cars window allows you to view/amend details of cars already entered and to enter details of new cars. To enter a new car, step through to the record number under which you wish to enter the car and provide the cost in millions along with chassis and engine make. Details of a current car can be changed in the same way.

Other operations are as for drivers.

Circuits

The circuits window allows you to view/amend details of circuits already entered and enter details of new circuits. To enter a new circuit step through to the round of the circuit for the current season and enter the information into the relevant icons. The date, pole lap and fastest lap icons will be reformatted as you enter the details.

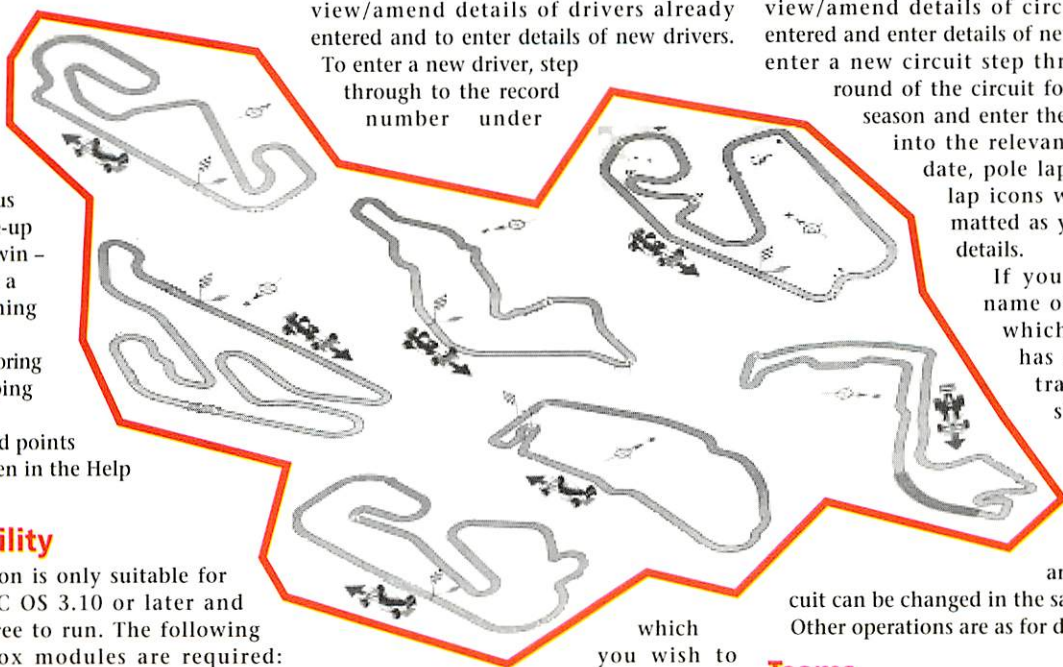
If you supply the name of a track for which Fantasy F1 has a sprite, the track will be shown in the bottom right hand corner. Details of an existing circuit

can be changed in the same way. Other operations are as for drivers.

Teams

The teams window allows you to view/amend details of teams already set up and enter details of new teams. To enter a new team step through to the record number under which you wish to add the team and enter the team name, two drivers and two cars.

You can select the drivers and cars by entering their record number in the writable icons or using the pop-up menus.





cover disc

Details of a current team can be changed in the same way.

The total cost of the team must not be above or below the maximum and minimum budget set in the options.

To delete details of a car click on Delete.

The points and statistics for the team will be updated automatically as details of the drivers and cars results are entered.

You can display details of a specific car using the Pop-up menus next to the chassis and engine icons. The number shown in brackets after the items in the menu relate to the record number of the car.

Results

The main Fantasy F1 window allows you to view, amend and add details of race results. First select the round in which you are interested, either by stepping through the rounds or using the pop-up menus next to the country and track icons. The results

already entered for the selected round will be displayed in the results pane. Click in one of the icons within this pane and the text caret will appear. You can then use the cursor keys to

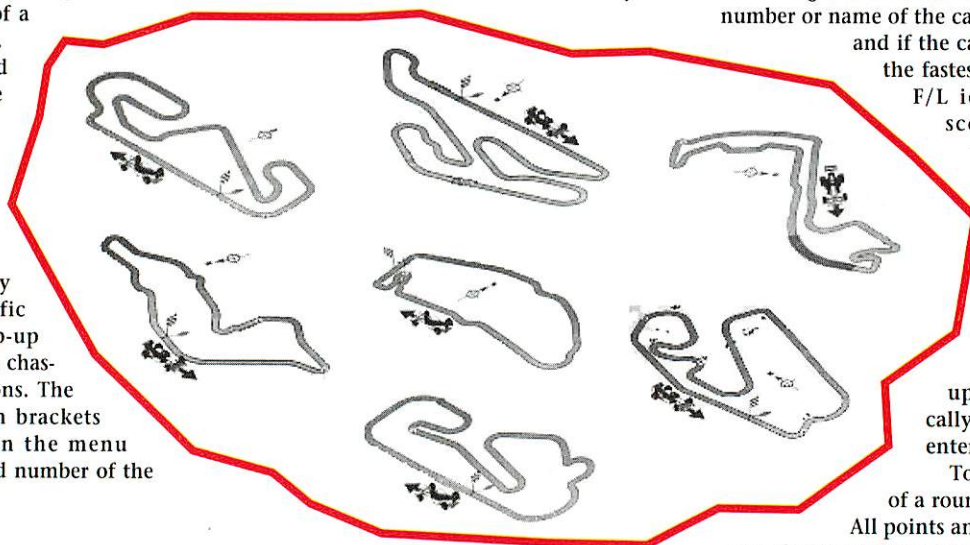
enter the driver record number or tab past this icon and enter the driver name (you only need to enter the first few characters of the name as the program will select the first matching driver from its list). Enter the number or name of the car in the same way and if the car/driver obtained the fastest lap click on the

F/L icon. The points scored by the driver/car will be shown in the points column - the points and statistics for the car, driver and relevant teams will be updated automatically as the results are entered.

To delete the results of a round click on Delete.

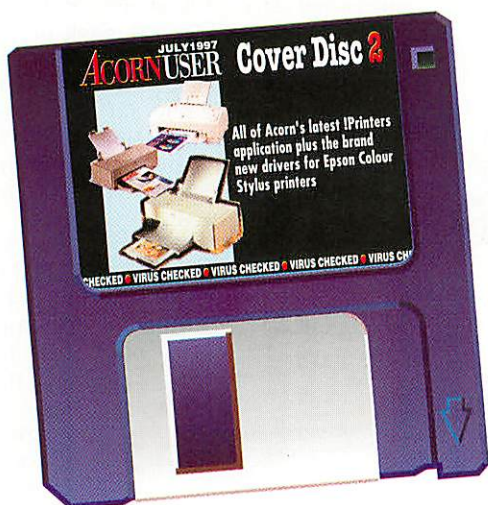
All points and statistics for the cars, drivers and teams will be recalculated automatically.

You can set the sort order that the results are displayed and entered in by clicking on the appropriate radio icon in the sort order box. Sort by Start, Finish, Driver Number, Car Number or Points scored.



move between the icons.

For each starting position on the grid enter the finishing position (if the car/driver starting from this position failed to finish leave blank), then in the next icon

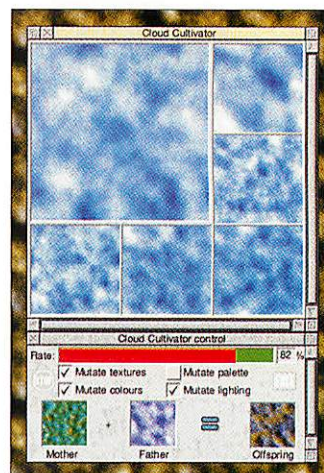


Regular items

- 3D series: See-through windows and doors
- Free Ads: all our Free Ads on disc
- Bucketloads of *INFO from graphics to games
- Mike Cook's stereo equaliser

Extras

- The latest !Printers application
- Acorn's new drivers for Epson Stylus printers
- Updated version of !Bootplus, now easier to use



Cloud Cultivator from the *INFO pages

Disc information

The software on these discs has been compressed using ArcFS 2 from VTi, and are opened by running a copy of ArcFS then double-clicking on the archive to open it. There is a copy of ArcFS on each disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.

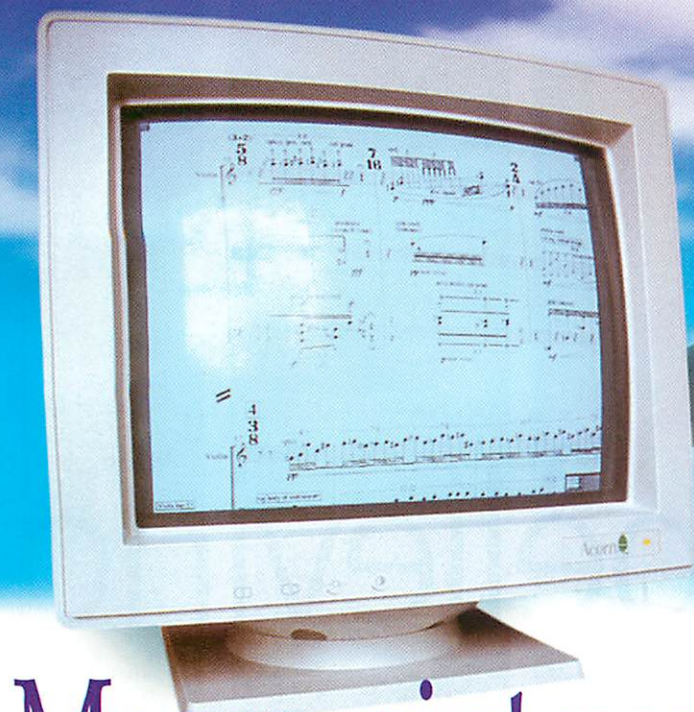
Faulty disc?

If your disc is faulty, test whether it will verify by clicking with Menu on the floppy drive icon and choosing Verify.

If it fails to verify or is physically damaged you should return it to TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH. If it verifies successfully return it to the Acorn User editorial office at the usual address.

The Acorn User cover discs have been checked for viruses using Killer version 2.500 from Pineapple Software.

"Extraordinary"
— The Times



Manuscript paper that thinks!

THE SIBELIUS music programs are world-famous for their simplicity, intelligence and amazing results.

There are four Sibelius programs available — choose between

our beginners' program **Junior Sibelius!** (£49), **Sibelius 6** (£179, for GCSE), **Sibelius 7 Student** (£495, for A-level and semi-professional work) or the state-of-the-art world-famous professional **Sibelius 7** program (£888).

The Sibelius programs are the most highly-acclaimed music software on any computer, used by such famous names as the **Royal Academy of Music**, **BBC**, **National Theatre** and **Oxford University**.

The Sibelius programs have been featured many times on worldwide TV and radio, and have received rave reviews in **The Times**, **Sunday Times**, **Independent**, **Financial Times** and **Telegraph**.

We've even opened an office in Los Angeles to cope with demand from Hollywood! Top-name film/TV composers who use Sibelius 7 include Geoffrey Burgon (**Life of Brian**, **Brideshead Revisited**), Howard Goodall (**Blackadder**, **Mr Bean**) and Trevor Jones (**Cliffhanger**, **Last of the Mohicans**).

To find out more about the Sibelius programs, contact your local dealer or Sibelius Software today. Free demonstration disks are available.

"This extraordinary computer program has changed the music world forever"
— **The Times**

"In a totally different league from anything else"

— **Royal Academy of Music**

"Sibelius 7 feels as if it has musical instincts"

— **The Independent**

"Dramatically reduces the time it takes to compose a piece of music and produce a score"

— **Financial Times**

"Instantly captured the imagination of staff and pupils alike"

— Paul McMasters, Head of Computing, **Winchester College**

"Medallist and Award Winner 1996"

— **British Computer Society Awards** for best software of the year

"The biggest surprise with Sibelius is how simple it is to learn and use effectively... the most comprehensive music package imaginable"

— **Times Educational Supplement**

"As easy to use as pen and ink"

— **John Rutter** (composer)

"Sibelius 7 can notate, print and play a musical score at a pace even more rapid than Mozart at his most fecund... Imagine what wonders Bach could have worked with such technology"

— **The Times** leader column



Give Rest, O Christ
Θανάση ή Κρίστε



MIDI KEYBOARDS & SOUND MODULES

Roland SK-50 keyboard

NOW JUST £459

Hugely popular with schools. 5 octaves, built-in speakers, 2 headphone sockets, 128 excellent General MIDI sounds, easy to use. (Also available with sustain pedal, X-stand, MIDI cables, 2 sets headphones and deluxe piano stool for just £499.)

Roland SC55 sound module

£299

128 high-quality General MIDI sounds

Roland SC88VL-WH sound module

£499

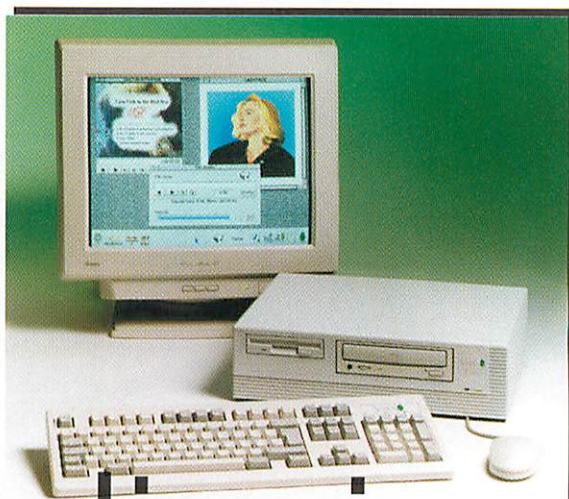
650 amazingly high-quality sounds (including General MIDI)

Sibelius Software, 75 Burrell St, Cambridge CB1 1DJ
Tel: 01223 302765 Fax: 01223 351947
email: info@sibelius-software.com
web: www.acorn.co.uk/developers/sibelius/

Prices exclude VAT and delivery, and may vary or change. Site licences & bundles available — details & prices on request. E&OE

A7000+

Using IS believing



It's here, the new A7000+, but is it more than just a re-vamped A7000? **Jack Kreindler** finds out

Driving up to Cambridge early one Friday morning, one question kept springing to mind. Why were ART so eager to invite journalists to come and inspect the A7000 replacement? The A7000 was nothing to write home about from an enthusiast's point of view, so why invite an open critic of Acorn's lower end products, which trail far behind similarly priced PC's in the mips and megahertz stakes, to review the A7000+?

Chris Cox, clan chief and self-proclaimed performance freak, welcomed me with enthusiasm at Acorn HQ. I was introduced to the new machine and immediately began to realise why everyone was so enthusiastic. This was not just a revamped A7000 with go-faster stripes. This was a new computer.

A7000+ spec

It ought to have been badged, and indeed nearly was called, the A8000. Only the box, power supply and the floppy drive are carried over from its predecessor. The A7000+ is 'armed' with an A7500FE central processor clocked at a very reasonable 48MHz. The FE suffix indicates that the processor unit also houses an integrated floating point arithmetic chip able to compute much of the highly taxing mathematics that the main ARM core normally handles.

Floating point co-processors are now very much standard on Motorola and Intel chip for Macs and PCs. Over time, software houses have developed their applications to take advantage of floating point co-processors. Acorn programs, on the other hand, have evolved in the opposite direction; some have resorted to software 'emulators' to carry out floating point routines and other programs have forgone floating point for the less accurate integer maths routines.

The ins and outs of floating point and integer maths is not within the scope of this review but suffice to say that there exist only a handful of very specialised



Now this is something the A7000 couldn't do; four replay files playing, albeit slowly, simultaneously

applications and public domain demos that can use floating point processors at all. The potential now exists for programmers to utilise the floating point co-processor, which was never there for the A7000 and is still not there on even the flagship 200MHz StrongARM Risc PC. But as with many of the new items on the A7000+, the floating point co-processor gives a strong indication of ART's direction for the next generation of Risc PC machines and RISC OS.

Hardware features

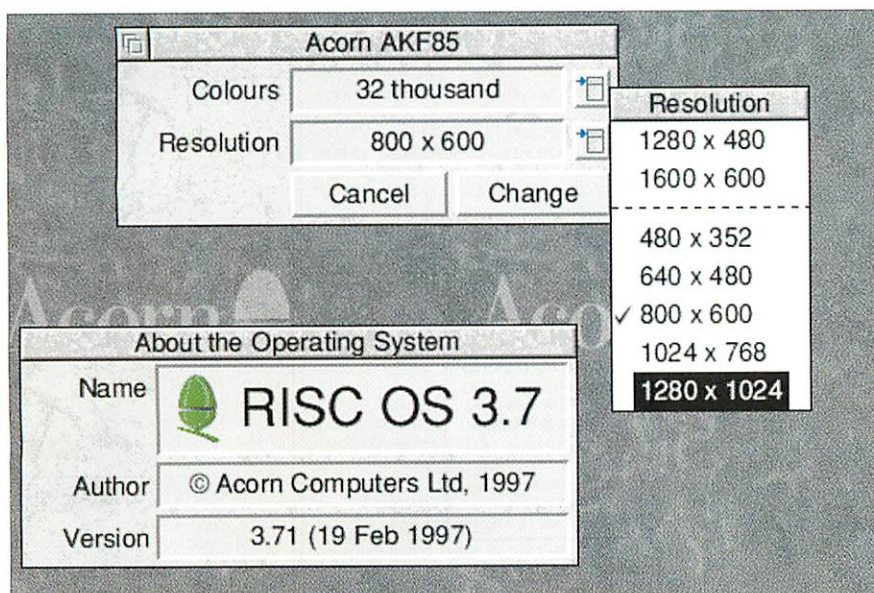
Other hardware features include an improved 32MHz data transfer rate for the main memory – twice as much as the current Risc PC. The bus also supports EDO RAM for faster 'flushing' and the motherboard can hold two SIMMs memory cards (128Mb maximum), one occupied as standard with an 8Mb SIMM. With the 48MHz internal clock and 32MHz EDO memory clock, the A7000+ is actually similar in

performance to an A700 Risc PC with a 40MHz ARM710 central processor and 1Mb of VRAM.

This vast leap in performance, right into the heart of Risc PC territory, is one of the justifications for trimming the Risc PC range down to just the 200MHz StrongARM version. On booting up the A7000+, the results of the improved performance are clear to see. The operating system installed on the review machine read 3.7 on the plaque but was actually development version 3.71 with some implementation of significant new RISC OS technology like Nested Windows.

Even with numerous applications, networking and development operating system patches to load, the boot sequence concluded 30 seconds later generating a very Risc PC-like environment. The screen mode was 1024x768 in 256 colours – not possible without 1Mb of VRAM on a Risc PC and not possible at all on the A7000.

The RISC OS 3.7 style display manager



1Mb screen modes available on A7000+ and version 3.71 of RISC OS

offers such useful resolutions as 800x600 in 32,000 colours, 1024x768 in 256 and even 1280x1024 in 16. These modes can make good use of 17 inch monitors and cover a range of needs from multimedia and video to graphics and DTP. To complement the video support for multimedia, 16-bit stereo sound comes as standard and for just £100 extra you get an internal eight-speed CD-ROM drive delivering 1200K/second data transfer. Rounding off the impressive spec sheet is a huge 1.2Gb IDE hard disc, certainly big enough for most users' needs.

What has not changed from the last model is the case which still accepts only one expansion card or one 5.25 inch internal device like a CD-ROM drive. This space does not interfere with the optional networking card which plugs directly onto the motherboard. Something else that remains unchanged is the recommended retail price, which now represents very good value for money.

Performance

Specification is one thing, performance is another. Officially the A7000+ has a dhrystone rating of 2.1 equating to around 30 million instructions per second. This is the sort of power rating measured 'at the fly-wheel' does not mean an awful lot in the real world.

To gauge the power of the A7000+ 'on the road' a number of benchmark tests were used all in an 800x600, 32,000 colour screen mode. I also managed to perform some 'alternative' tests, perhaps a more useful estimate of speed for some users:

- The classic *ArtWorks* Apple redraw took just 10 seconds
- *ArtWorks* (not quick loading) and *Impression Publisher* took 18 and 6 seconds respectively, while the times for

Ovation Pro and *Techwriter* were 15 and 3. Loading six less tools than on the A7000+ version, the old machine took a hefty 22 seconds to run *ArtWorks*

- To find one file among 4,500 took 32 seconds which compares to around five seconds on a Risc PC but is around 50 per cent faster than the A7000
- Bootup with full networking, backdrop, desktop manager application and development operating system; 30 seconds. Safe boot; 10 seconds
- The number of frames per second generated by the fabulous *Jan3D* demo were enough for smooth animation (nine per second for the skull in the foreground) though this did not utilise the extra power of the floating point co-processor, ideal for such 3D routines
- The molecular modelling package *RasMol* visualising a complex, 165K organic molecule comfortably rendered two frames per second with full specular lighting and spacefilling
- *Quicktime* VR loaded the Piccadilly AVI file in 15 seconds which panned and zoomed seamlessly once loaded.
- High Resolution Acorn *Replay* files with sound played smoothly with only one very brief skip every seven or so seconds
- The VRML file, *Rose*, took just three seconds to load into *VRML Eyes*, and could generate over 90 frames per minute in gouraud shading mode
- Fractal painter file, *Shades*, was fully rendered in 1 min 23 seconds
- *Paint* took two seconds to load an 800x600 JPEG file.

It is difficult to appreciate the speed from these numbers. The overall impression I was left with, after all the tests and using everyday applications, was that it ran faster than my old 8Mb ARM610 Risc PC by about 30 per cent and faster than

my 4Mb A5000 by about 300 per cent. This is still way behind StrongARM especially in disc operations which is not much improved over the sluggish RISC OS 3.1 A7000. This is something of a disappointment but only in comparison to the great improvements in other areas.

Other highlights

Other software and operating system highlights were:

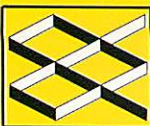
- Prototype Nested Windows
- A key software development for the future of RISC OS
- Gnome's X software with a Windows 3.11 front end – running all the usual PC apps without the need of a PC co-processor.

The performance would be more than adequate for spreadsheets and word-processing though heavy graphics usage would really need a PC card. It should be noted that the A7000+ has no need for its fan without a CD-ROM installed, making for near silent running if needed.

The now discontinued A7000 was a computer I would never have considered buying for my needs which are graphics and DTP. The A7000+ I wouldn't mind at all. For the school, home, business and those A5000 users with floating point processors who want a new machine but cannot justify the cost of a Risc PC, the A7000+ is the ideal machine with none of the StrongARM compatibility problems. It's small, quiet, powerful and pretty good value, introducing the future of ART's personal computer technology.

Product details

Product: A7000+
 Prices: Begin at £87.66 (ex VAT)
 Supplier: Acorn Group plc
 Address: Acorn House, 645 Newmarket Road, Cambridge, CB5 8PB
 Tel: (01223) 725000
 Fax: (01223) 725100
 E-mail: info@acorn.co.uk
 WWW: http://www.acorn.co.uk/
 or contact your local dealer



CTA DIRECT

Mail Order Specialists

EMAIL: sales@cta.u-net.com http://www.cta.u-net.com



Tel - 01942 511000

Fax - 01942 749325

Curriculum Training Associates
Dept. AU07, 34a Coach Road
Astley, Tyldesley
Gtr Manchester
M29 7ER

Special Offer Canon BJC4100 Colour Printer £159+vat **While Stocks Last**

RiscPC/A7000 System Offers

£200.00 OFF* Exchange deal
Upto 5% value of machine in goods or credit.. **FREE**

i.e. RPC SA 2M+16M/2.1G/8xCD
& 17" monitor for only £1995 inc VAT

RPC base models from £999.00 inc VAT

Or we will match or beat your best offer!

RiscPC PC Cards

	With RiscPC or Separately
SX-33	£115.99 inc VAT
DX2-66	£174.99 inc VAT
DX4-100	£233.99 inc VAT
586-100	£350.99 inc VAT

PC CD-ROM Packs	With PC card	Separately
Kiddie Pack	FREE	£29.00
Education Pack	FREE	£29.00
Games Pack	FREE	£29.00
Adventures Pack	FREE	£29.00
Resource Pack	FREE	£29.00

These Prices Include VAT

Desktop FAX MODEMS

	Ex. VAT	Inc. VAT
33600 Voice CE approved	£85.00	£99.88
33600 Voice BABT approved	£99.00	£116.33
28800 BABT inc line splitter	£160.00	£193.88
33600 U.S. Robotics Courier	£231.65	£272.19

POWERED SPEAKERS

	Ex. VAT	Inc. VAT
25 watts with PSU	£16.98	£19.95
80 watts with PSU	£19.95	£23.44
120 watts with PSU	£24.68	£29.00
160 watts with PSU	£34.00	£39.95
240 watts with PSU	£39.00	£45.83
Subwoofer 50 watts with PSU	£49.00	£57.58
Comms System Mic/Headphones	£8.50	£9.99

ETHERNET INTERFACES

All ethernet i/f's etc are ANT	Ex. VAT	Inc. VAT
A3000 int 10base2 Access+	£89.00	£104.58
A3000 int 10baseT Access+	£89.00	£104.58
A400 10base2 Access+	£89.00	£104.58
A400 10baseT Access+	£89.00	£104.58
A400 10base2+5 Access+	£99.00	£116.33
A400 10base2+T Access+	£99.00	£116.33
A3020 10base2 Access+/ext MAU	£99.00	£116.33
A3020 10baseT Access+/ext MAU	£99.00	£116.33
RiscPC/A7000 10base2 Access+	£89.00	£104.58
RiscPC/A7000 10baseT Access+	£89.00	£104.58
A400 Access+ ROM upgrade	£10.00	£11.75
A3000 Access+ ROM upgrade	£10.00	£11.75
PC600 Access+ ROM upgrade	£10.00	£11.75

THE BEST! PRINTER PRICES

	Ex. VAT	Inc. VAT
Canon BJ30 portable mono A4	£139.00	£158.63
Canon BJ70 portable colour	£169.00	£198.58
Canon BJC 240 colour	A4 £149.00	£175.08
Canon BJC 620	A4 £249.00	£292.58
Canon BJC 4100 colour	A4 £159.00	£186.83
Canon BJC 4200 colour	A4 £179.00	£210.33
Canon BJC 4550 colour	A3 £310.00	£365.13
Epson Stylus 200 mono	A4 £119.00	£139.83
Epson Stylus 200 colour	A4 £155.00	£182.13
Epson Stylus Pro XL+	A3+ £915.00	£1075.13
Epson Stylus 400 colour	A4 £185.00	£217.38
Epson Stylus 600 Colour	A4 £237.00	£278.48
Epson Stylus 800 Colour	A4 £345.00	£405.38
Epson Stylus 1520 Colour	A3 £625.00	£734.38
HP 400 colour	A4 £119.00	£139.83
HP 690C Colour	A4 £218.00	£256.15
HP 870CXI Colour	A4 £309.00	£363.08
HP LASERJET 5L	£259.00	£304.33
HP LASERJET 6P	£479.00	£562.83
Star LC-100 9-pin 80-col colour	£75.00	£88.13
Star LC-240 24 pin 80-column	£85.00	£99.88

We supply all Canon, HP & Epson ranges please ask

MICE & KEYBOARDS

	Ex. VAT	Inc. VAT
Acorn Original Mouse	£25.00	£29.38
Acorn Replacement Mouse	£12.00	£14.10
Ergo Keyboard for RiscPC	£29.79	£35.00
Archie Keyboard (high grade)	£99.00	£116.33

A3000/A3010 Hard Drive & Interface

	Ex. VAT	Inc. VAT
Internal 85 Mb	£109.00	£128.08
Internal 250 Mb	£129.00	£151.58
Internal 340 Mb	£139.00	£163.33
Internal 420 Mb	£149.00	£175.08
Internal 512 Mb	£169.00	£198.58
Internal 700 Mb	£189.00	£222.08
Internal 1 Gb	£211.91	£249.00
External for A3000 add £20.00 +VAT		

HARD DRIVES @best prices

Bare drives	Ex. VAT	Inc. VAT
85Mb 2.5" IDE	£59.00	£69.33
250Mb 2.5" IDE	£79.00	£92.83
340Mb 2.5" IDE	£89.00	£104.58
512Mb 2.5" IDE	£115.00	£135.13
1Gb 2.5" IDE	£159.00	£186.83
540Mb 3.5" IDE	£85.00	£99.88
1Gb 3.5" IDE	£115.00	£135.13
1.2Gb 3.5" IDE	£125.00	£146.88
1.7Gb 3.5" IDE/Qua F/B	£135.00	£158.63
2.1Gb 3.5" IDE/Qua F/B	£149.00	£175.08
2.5Gb 3.5" IDE	£159.00	£186.83
3.2Gb 3.5" IDE/Qua F/B	£179.00	£210.33
3.8Gb 3.5" IDE/Qua F/B	£210.00	£246.75
5.1Gb 3.5" IDE	£299.00	£351.33
1.2Gb 3.5" SCSI	£149.00	£175.08
2Gb 3.5" SCSI	£229.00	£269.08
3.2Gb 3.5" SCSI	£249.00	£292.58
4.3Gb 3.5" SCSI	£399.00	£468.83
Removable IDE Housing Unit	£20.00	£23.50
Removable SCSI Housing Unit	£20.00	£23.50
SCSI External Case	£42.00	£49.35

All drives are formatted for use with Acorn Machines

6.4Gb IDE Hard drives

5.25" £275.00 +VAT (£323.13 inc VAT)
3.5" £349.00 +VAT (£410.08 inc VAT)

5.1Gb IDE Hard drives

3.5" £299.00 +VAT (£351.33 inc VAT)

9.1Gb SCSI Hard drives

3.5" £899.00 +VAT (£1056.33 inc VAT)

Removable Drives

	Ex. VAT	Inc. VAT
Zip 100 Ext 100mb SCSI	£129.00	£151.58
EZflyer ext 230 SCSI	£199.00	£233.83
Jazz 1Gb Int SCSI	£297.00	£348.98
Jazz 1Gb Ext SCSI	£339.00	£398.33
SyJet 1.5G int SCSI/IDE	£279.00	£327.83
SyJet 1.5G Ext SCSI	£339.00	£398.33
100mb Zip Drive Disk	£11.00	£12.93
1Gb Jazz Drive Disk	£68.00	£79.90
EZflyer 230 Cartridge	£19.90	£23.38

Tape Streamers

	Ex. VAT	Inc. VAT
350 Mb For RiscPC inc S/W	£175.00	£205.63
2 Gb HP Sesi DAT	£403.03	£450.38
4 Gb HP Sesi DAT	£445.33	£523.26
8 Gb Wangtec Sesi DAT	£599.00	£703.83
DC2120 tapes 10 pack	£8.50	£9.99
DAT tapes 10 pack	£70.00	£82.25
DAT tapes 10 pack	£8.50	£9.99
DAT tapes 10 pack	£60.00	£70.50

FLOPPY DISKS @20p !

	Ex. VAT	Inc. VAT
DD Re-labelled Acorn fnt 10 pk	£2.00	£2.35
DD Re-labelled Acorn fnt 100 pk	£17.02	£20.00
DD bulk 10 pack	£2.00	£2.35
DD bulk 100 pack	£17.02	£20.00
HD Re-labelled Acorn fnt 10 pk	£2.00	£2.35
HD Re-labelled Acorn fnt 100 pk	£17.02	£20.00
HD bulk 10 pack	£2.00	£2.35
HD bulk 100 pack	£17.02	£20.00
HD Branded 10 pack	£3.50	£4.11
100 cap Disk Box	£2.98	£3.50

Casio QV10 Camera

	Ex. VAT	Inc. VAT
With Acorn Software	£349	£410.08
With PC Software	£299	£351.33

MONITORS

14" Multimedia Monitor for ALL Acorns (even A3000) £239.00 inc. VAT

	Ex. VAT	Inc. VAT
14" SVGA 0.28 Colour	£139.00	£163.33
14" SVGA 0.28 MPR2 Colour	£165.00	£193.88
15" SVGA 0.28 MPR2 Colour	£198.00	£232.65
17" SVGA 0.28 MPR2 Colour	£339.57	£399.00
17" Multisync 0.28 Colour	£359.00	£421.83
29" SVGA Colour w/spkrs	£849.00	£997.58
(AKF50) Multisync M-media	£239.00	£280.83
(AKF60) SVGA Hi Res Colour	£165.00	£193.88
Multisync A300/3000 cable	£8.50	£9.99

CD-ROM DRIVES

IDE	SCSI
24x max £99.00 (116.33inc)	
20x max £89.00 (104.58inc)	
16x max £79.00 (£92.83inc)	
12x £69.00 (£81.08inc)	P.O.A.
8x £59.00 (£69.33inc)	£119.00 (£139.83inc)
4x £49.00 (£57.58inc)	£99.00 (£116.33inc)
4x4x Autochanger for 3.5/3.6	£59.00 (£69.33inc)
£89.00 + VAT	
3.5 8x driver £12+ vat (£14.10)	
IDE fitting kit £5 +vat	SCSI kit from £10 +vat

COLOUR SCSI SCANNERS

	Ex. VAT	Inc. VAT
SCSI Scanner 600dpi	£170.00	£199.75
SCSI Scanner 800dpi	£249.00	£292.57
SCSI Scanner 1200dpi	£299.00	£351.32
Imagemaster & Twain for above	£49.00	£57.58

Printer Ribbons, Inkjet Cartridges

New/Recycled Laser Toner
&
Cartridges
Prices available on request

RiscPC Ergo Keyboard

only £29.79 exc Vat £35.00 inc Vat

RiscOS 3.1 upgrades

only £29.00 exc Vat £34.08 inc Vat

ACORN Joystick adapters

only £29.95 inc Vat (please state model)

BARGAIN BASEMENT

This is a selection, a full list including Acorn titles is being prepared please RING NOW!

HP LASERJET 5L	£255.28	£299.95
A3000 replacement floppy	£39.00	£45.83
5.25 BBC disks per pack 10	£3.00	£3.53
A3000 bases from **	£100.00	£117.50
Mouse pads from	£0.75	£0.88
4x IDE cd-rom for 3.6+	£49.00	£57.58
Epson 800 cart. orig. (S020025)	£7.00	£8.22
CD General Resource Titles	£8.50	£9.99
CD Education/Multimedia Titles for PC		
Websters Concise Encyclopedia	£8.50	£9.99
MS Encarta 97 Encyclopedia	£39.00	£45.83
many more titles available from 4.99 inc VAT		
CD Anglia Multimedia Titles for PC/Macintosh		
Being a Scientist	£17.00	£19.98
British Isles from the Air	£17.00	£19.98
Nelson and his Navy	£17.00	£19.98
Romans	£17.00	£19.98
Seashore life	£17.00	£19.98
The Worlds weather	£17.00	£19.98
Understanding the body	£17.00	£19.98
PC Entertainment		
Various titles from 4.99 inc VAT		
** Second user goods 90 days warranty		

We can repair/upgrade your

machine(s) and monitors at competitive prices please ask.

All Acorn's including BBCs & PCs

StrongARM Special Offer

£249.00 inc VAT
(with any Hard Drive / Memory purchase)

NEW LOW MEMORY Prices

	Ex. VAT	Inc. VAT
4-8 MB Up. (A310,440,3000*)	£159.00	£186.83
4-8 MB Up. (A5000*)	£159.00	£186.83
*rework for A3000/5000/25mhz	£25.00	£29.38
A3010 1-2 MB Upgrade	£37.00	£43.48
A3010 2-4 MB Upgrade	£62.00	£72.85
A3010 1-4 MB Upgrade	£79.00	£92.83
A3020/4000 2-4 MB Upgrade	£65.00	£76.38
A5000 2-4 MB Upgrade	£68.00	£79.90
A3000 1-2 MB Non-Upgrade	£20.00	£23.50
A3000 1-2 MB Upgradeable	£45.00	£52.88
A3000 2-4 upgrade for above	£60.00	£70.50
A3000 1-4 MB Upgrade	£69.00	£81.08
A3000 Serial Port Upgrade	£23.00	£27.03
A310 4Mb Upgrade	£89.00	£104.58
A400/1 1Mb Upgrade per meg	£35.00	£41.13
Rise OS Carrier Board (A310)	£20.00	£23.50
MEMC 1A upg (short supply)	£45.00	£52.88

RISC PC MEMORY

	Ex. VAT	Inc. VAT
Also FOR A7000		
4Mb SIMM	£14.50	£17.04
8Mb SIMM	£34.00	£39.95
16Mb SIMM	£52.00	£61.10
32Mb SIMM	£95.00	£111.63

RISC PC VRAM

1Mb VRAM (upgradable)	£59.00	£69.33
2Mb VRAM	£89.00	£104.58
1-2 Mb upgrade	£55.00	£64.63

RiscPC 133MHZ 586 upgrade

from only £199.00 + vat

(Available soon)

Send in your MK1 card

and £240.00 (inc VAT & P&P)

RiscPC MMX upgrades

Coming soon

Please ring for availability

Alternative PC Base Units

FROM ONLY £399.00 + VAT
ring for latest prices

All Pentium grade machines have the following:
PCI motherboard with 256k/512k cache, 8/16 Mb memory,

All plain

Ian Burley
inspects the
crew at Acorn

sailing

As a company Acorn are like a ship sailing into new seas. The captain and many of his officers are relatively new. Much of Acorn's old cargo has changed, though links with old ports of call haven't been entirely severed. In this first instalment of a two-part feature about key people at Acorn, we get to know the captain himself, David Lee and two of his bridge crew, Steve France and Chris Cox. We find out how they have contributed to the voyage so far and what lies ahead.

David Lee

We interviewed David Lee just a few days before Acorn's latest staff re-structuring — see the news pages for more details. When we spoke to Lee he was still plain and simply Acorn's managing director, having taken over from Sam Wauchope nearly two years ago. As part of Acorn's continuing progress of adapting to their newly-found international business environment, American-style management tags have been adopted, so David Lee is now referred to as president and CEO (chief executive officer). Both Steve France and Chris Cox are now VPs, or vice presidents.

The new labels sound very impressive, but one thing David Lee is firmly against is any unwarranted claim to fame. 'I have this pathological hatred of the cult of the personality,' Lee exclaims. 'I have consistently refused in the past to participate in any interviews which have been slanted in this way,' he added. The purpose of this feature is to extract a personal view of things, but despite the warning shot across our bows, Captain Lee was satisfied we weren't about to propose the inauguration of an appreciation society in his name.

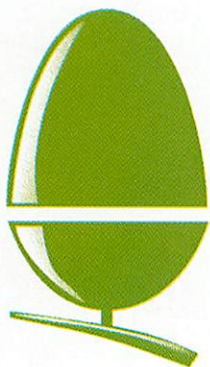
We are not about to paint a picture of an impersonal man, however. David Lee has discovered a second life through his



appointment at Acorn, admitting that while he thought his previous job was enjoyable at the time, in retrospect it could never compare with working at Acorn. Lee came from a solid senior management position at Olivetti UK. He was far from prepared for the hive of activity which was and remains the Acorn dockyards. Time has flashed by; we put it to him that in researching his history it had surprised us that his tenure at Acorn was fast approaching its second year: 'Not as much as it surprised me, I can tell you,' he remarked.

Acorn User first spoke with David Lee during the transition period in late July 1995 when the outgoing Sam Wauchope was still showing the new guy the ropes. Whichever way you want to look at it, Wauchope had been forced out of Acorn, but the hand over to Lee was very smooth. Wauchope even told Lee that if he needed anything, to not hesitate to phone him at home.

It transpired that Lee didn't need to dial that number, but was very grateful for the cordial way in which Wauchope passed on his job. 'We had some good laughs and he assured me he wished me every success and said - I'm expecting you to take good care of my share options!' The paths of the two men haven't crossed very frequently since then, but they did bump into each other at a function a few months ago. It seems Wauchope had held onto his shares, 'We had a little joke about that, he said - you're doing all right so far! I'm quite happy with the price!'



All plain sailing

Lee admits he's very wary of the press after he was the subject of a distorted interview in the *Daily Mail*. When we first spoke to Lee and asked him for some first impressions at Acorn, he categorically refused on the grounds that it was far too early to dish out any initial impressions. Some 20 months on, we expected that he must have developed some impressions by now, 'Yes, in fact I had my first impressions very quickly,' came the unhesitating reply.

'I think the overwhelming impression that I had, and it did take me two or three months to recognise the importance of this, was this phenomenon which I now refer to, along with others, as "the Acorn community". Because this is something I had never experienced anywhere previously in my business life; I had been told about it by other people in my first days in Acorn, but frankly I didn't believe it.' Lee added that after three months he certainly did believe it and realised just what a huge strength it was. 'I found that absolutely astonishing. I simply did not perceive this network of dealers, distributors, software developers, etc. who almost had a religious belief in the Acorn platform.'

Having come from one of the biggest PC manufacturers in Europe, Lee was aware that some feared he was about to usher in a bland new era of Wintel conformity at the expense of Acorn's core independence and innovation. He recalled with some amusement that somebody had posted a message on the Internet referring to him

as a 'bastard accountant.'

A defining moment for Lee happened in a bar late one evening at an education show when a group of developers presented Lee with a tee-shirt which featured a Microsoft logo on the front and the banner 'bastard accountant' on the back. But the shirt also displayed a graph of Acorn's predicted financial fortune under Lee's tenure. Lee treasures that particular souvenir and promises to wear it at an Acorn event one day, 'just to shock some people.'

So what of the future? Under Lee, Acorn have been transformed from a tightly run, semi-autocratic, organisation which focused sharply on niche markets, like education. People within Acorn quickly convinced him that the company had valuable technologies which had not been given the opportunity to prove their commercial worth. At the same time Acorn had to change direction in order to survive. Those were critical times for Acorn - the shedding of jobs through severe restructuring, for example. However, fortune shined and Acorn were given their great break with the crucial Oracle deal.

Lee is quick to direct the credit for many of the positive changes made at Acorn to others. Lee reflects that before his arrival, decisions appeared to come from the top down at Acorn. 'I like to work the other way,' says Lee, who explained that someone had described his effect on Acorn as if he had popped the cork from a bottle of champagne which had been shaken around until the pressure had reached a



Hard Drives

	Exc. VAT	Inc. VAT
A3000 120Mb IDE - User Port. Internal	£145	£163
A3000 170Mb IDE - User Port. Internal	£155	£182
A3000 210Mb IDE - User Port. Internal	£165	£194
A3000 410Mb IDE - User Port. Internal	£259	£304
A3010 120Mb IDE. Internal	£135	£159
A3010 170Mb IDE. Internal	£145	£170
A3010 210Mb IDE. Internal	£165	£194
A3010 410Mb IDE. Internal	£249	£293
A3020 120Mb IDE. Internal	£85	£100
A3020 170Mb IDE. Internal	£95	£112
A3020 210Mb IDE. Internal	£105	£123
A3020 410Mb IDE. Internal	£199	£234

A3000 400 5000 5000 A7000 RISC PC

512Mb IDE Drive. Internal	£112	£132
650Mb IDE Drive. Internal	£129	£152
1.0 Gb IDE Drive. Internal	£129	£152
1.6 Gb IDE Drive. Internal	£189	£222
2.5 Gb IDE Drive. Internal	£199	£234

SCSI DRIVES (INTERNAL)

540Mb SCSI Drive. Internal	£125	£147
850Mb SCSI Drive. Internal	£139	£163
1.2 Gb SCSI Drive. Internal	£199	£234
2.0 Gb SCSI Drive. Internal	£329	£387
4.0 Gb SCSI Drive. Internal	£349	£411

SCSI DRIVES (EXTERNAL)

540Mb SCSI Drive. External	£165	£194
850Mb SCSI Drive. External	£179	£210
1.2 Gb SCSI Drive. External	£239	£281
2.0 Gb SCSI Drive. External	£369	£434
4.0 Gb SCSI Drive. External	£349	£411

Syquest Drives

	Exc. VAT	Inc. VAT
270Mb IDE Drive. Internal	£179	£210
270Mb SCSI Drive. Internal	£109	£128
270Mb SCSI Drive. External	£149	£175
270Mb Syquest Cartridge	£38	£45

Optical Drives

	Exc. VAT	Inc. VAT
230Mb SCSI Drive. Internal	£325	£382
230Mb SCSI Drive. External	£365	£429
640Mb SCSI Drive. Internal	£369	£434
640Mb SCSI Drive. External	£414	£486
230Mb Optical Cartridge	£12	£14
640Mb Optical Cartridge	£35	£41

Memory

	Exc. VAT	Inc. VAT
A3000 1-2Mb	£39	£46
A3000 1-4Mb	£85	£100
A3010 1-2Mb	£38	£45
A3010 1-4Mb	£89	£105
A3020 2-4Mb	£74	£87
A4000 2-4Mb	£74	£87
A5000 2-4Mb	£69	£81
A5000 4-8Mb	£175	£205
RISC PC 4Mb	£19	£22
RISC PC 8Mb	£29	£34
RISC PC 16Mb	£65	£76
RISC PC 32Mb	£129	£152

Scanners

Epson GT-5000 300x300 dpi	£299	£351
Epson GT-9000 600x600 dpi	£599	£704
UMAX S86 300 x 600 dpi	£279	£328

Upgrades

	Exc. VAT	Inc. VAT
A3000 400 IDE Card - User Port	£69	£81
A3000 IDE Card - User Port	£69	£81

A3010 IDE Card	£57	£67
SCSI Card (All Acorn Computers)	£85	£95
RISC OS 3 (Chips Only)	£29	£34
RISC OS 3 (Chips Software & Manual)	£59	£69
SCSI 25 to 50 Way 1 Metre	£10	£12
SCSI 50 to 50 Way 1 Metre	£10	£12
SCSI Terminator	£10	£12
SCSI 3 Connector Ribbon Cable 1 Metre	£10	£12
SCSI 4 Connector Ribbon Cable 1 Metre	£12	£14
IDE 3 Connector Ribbon Cable 1 Metre	£8	£9

Multiple SCSI Storage Solutions by DATA CHASER

Any combination of 1 to 8 SCSI Devices in one Professional SCSI Enclosure



Payment Cards Welcome



CD-ROM Drives

x8 SPEED CD SPECIAL £79.00

BARE INTERNAL CD-ROM DRIVES FOR RISC PC & A7000

	Exc. VAT	Inc. VAT
RISC PC A7000 x4 Speed Internal IDE	£45	£53
RISC PC A7000 x8 Speed Internal IDE	£79	£93
RISC PC A7000 x8 Speed Internal SCSI	£109	£128
RISC PC A7000 x8 Speed Internal SCSI	£129	£152

INTERNAL SCSI CD-ROM KITS FOR RISC PC & A7000

RISC PC A7000 x6 Speed Internal with SCSI Card	£189	£222
RISC PC A7000 x8 Speed Internal with SCSI Card	£214	£251

EXTERNAL SCSI CD-ROM KITS SUITABLE FOR ALL ACORN COMPUTERS INCLUDING SCSI CARD

x6 Speed External (Complete Kit)	£249	£293
x8 Speed External (Complete Kit)	£269	£316

CD-ROM TOWERS (SCSI)

x6 Speed SCSI 2 Drive Tower System	£289	£340
x8 Speed SCSI 2 Drive Tower System	£309	£366
x8 Speed SCSI 4 Drive Tower System	£559	£657
x8 Speed SCSI 4 Drive Tower System	£639	£751
x8 Speed SCSI 6 Drive Tower System	£839	£986
x8 Speed SCSI 6 Drive Tower System	£949	£1115

i-Cubed Network Cards

Etherlan 102 for A3000 3010 3020 4000 (Module Slot Combo)	£119	£140
Etherlan 210 for A3020 A4000 (Network Slot 10Base 2)	£125	£147
Etherlan 211 for A3020 A4000 (Network Slot 10Base T)	£126	£148
Etherlan 512 for A5000 & A4000 300 (Module Slot Combo)	£119	£140
Etherlan 513 Fibre Optic Adapter for A5000 & A4000 300	£389	£457
Etherlan 522 for RISC PC with DMA for improved Performance	£145	£170
Etherlan 523 Fibre Optic Adapter for RISC PC 600 700 & A7000	£269	£316
Etherlan 602 for RISC PC & A7000 (Module Slot Combo)	£99	£116
Etherlan 102 A+ for A3000 with FLASH ROM (Acorn Access +)	£139	£163
Etherlan 210 A+ TenBase2 A3020 4000 FLASH ROM (Acorn Access +)	£145	£170
Etherlan 211 A+ TenBase2 A3020 4000 FLASH ROM (Acorn Access +)	£145	£170
Etherlan 512 A+ Combo for A5000 FLASH ROM (Acorn Access +)	£139	£163
Etherlan 602 A+ for RISC PC FLASH ROM (Acorn Access +)	£115	£135

AVIGNON ETHERNET BRIDGE PRODUCTS

E102B A3000 Avignon Bridge Card	£169	£199
E200B TenBase2 A3020 Avignon Bridge Card	£179	£210
E201B TenBaseT A3020 Avignon Bridge Card	£179	£210
E512B A5000 Avignon Bridge Card	£169	£199
E602B RISC PC & A7000 Avignon Bridge Card	£149	£175

Etherlan B Avignon Software Upgrade for any above Etherlan Card

Technology Matrix supply a full range of i-Cubed Network products. Please call for prices

Equipment, prices and backup that make Technology Matrix the preferred supplier



Technology Matrix **Hot Line** 0161 320 0000

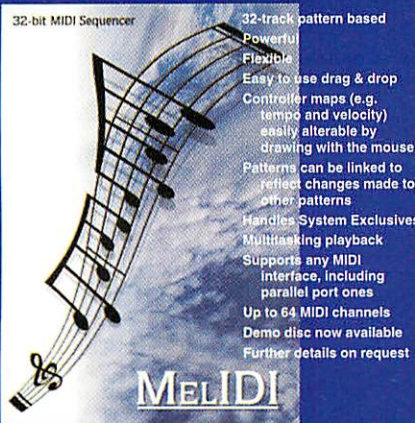
89a Stockport Road, Denton Manchester M34 6DD. Fax: 0161 320 3210

Liquid Silicon

Coming soon to an Acorn near you...

Kodak Digital Cameras

Further information available



Computer Systems

These prices are valid for all methods of payment.

Call for a 'DIY' price.

Risc PC SA 4Mb+0Mb 1.2Gb HD, AKF60	£1358.71
Risc PC SA 8Mb+2Mb 1.2Gb HD, AKF60	£1646.71
A7000+ 4Mb, Network, AKF60	£911.04
A7000+ 8Mb, 1.2Gb, AKF60	£1055.04

Monitor options when buying a Risc PC:

Acorn AKF91 (17")	add £366.60
Iiyama MF-8515F (15")	add £5.00
Iiyama 350 (MF-8515G)	add £30.00
Iiyama MF-8617E (17")	add £225.00
Iiyama MF-8617ES (17")	add £285.00
Iiyama MF-9017E Pro (17")	add £285.00
Iiyama MF-8221T (21")	add £822.00
Iiyama 500 (MF-8721T)	add £862.00
Iiyama MF-9021T Pro (21")	add £862.00

NEW LOW PRICES

FREEPOST EH2725
Kirkcaldy, Fife, KY2 5BR
United Kingdom

Tel: (01592) 592265 Fax: (01592) 596102

email: Liquid@cablenet.co.uk

http://www.cybervillage.co.uk/acorn/liquid/

PC cards (when bought with a machine):

SX-33	£116.30
DX2-66	£174.50
DX4-100	£233.00
5x86-100	£349.00
5x86-133	£349.00
PC Pro (includes PC Exchange)	£47.95
PC Sound Pro	£29.50
Other options (with machine):	
1Mb VRAM to 2Mb	add £60.00
4/8 speed CD ROM drives	£49.00
Modem (28.8) Network Computer	£457.10
Ethernet (10BaseT) Network Comp	£457.10

Memory Upgrades

Please call to check prices. Others available.

A3010 1-2 Mb	£44.50
A3010 1-4 Mb	£94.00
Risc PC/A7000 SIMMs:	
4Mb	£25.40
8Mb	£46.00
16Mb	£84.00
32Mb	£164.50
1Mb VRAM - from	£84.00
2Mb VRAM	£114.00
Flash SSD (128K)	£34.95
Flash SSD (256K)	£54.95
Flash SSD (512K)	£89.95
Flash SSD (1Mb)	£119.50
Flash SSD (2Mb)	£192.00
Flash SSD (4Mb)	£325.95
RAM SSD (128K)	£49.95
RAM SSD (512K)	£129.90
RAM SSD (1Mb)	£245.00

Music & Sound Section

This is a small example of our music section

MIDI Max card	£82.00
Blitfolio 7 CD	£47.95
Blinds	£24.95
Brake Horse Power	£85.90
The Cobalt Seed	£22.00
DarkWood	£22.00
DataPower	£110.50
DrawWorks 2	£20.40
Drifter	£30.00
Dune II	£31.00
Dune II CD	£45.00
Empire Soccer 94	£22.00
Fire & Ice	£17.50
Flashback	£24.00
Game On! 2.5	£15.00
Global Effect	£31.00
ImageFS 2	£45.95
Impression Publisher	£135.00
Impression Style	£88.00

Yamaha YST-M7 speakers - £44.00

Yamaha YST-M15 speakers	£58.00
YST-M20 DSP speakers	£66.00
YST-MSW10 subwoofer	£88.00

Other Hardware

ARM Switcher (allows two processor cards to be installed and switched between)	£119.00
Connect 32 SCSI 2 RPC card	£211.50
2.1Gb Fast SCSI 2 drives	£339.00
Canon BJ30	£164.00
Canon BJC70	£214.00
Canon BJC210	£188.00
Canon BJC4100	£254.00
Canon BJC620	£383.00
Epson Stylus 200 Mono	£154.00
Epson Stylus 200 Colour	£192.00
Epson Stylus Colour 500	£288.00
Turbodriller (with printer)	£47.00
Hard drives & kits	£Call
HP 5L laser printer	£408.00
HP 4V laser printer	£1749.00
Panorama digitisers - from	£292.50
Pocket Book A-Link	£59.50
Power-tec SCSI 2 card	£195.95
RapIDE 32 card	£139.95
Risc TV	£290.00
Risc PC second slice	£116.30
RPC second slice (no PSU)	£90.00
StrongARM upgrade	£275.00
VideoDesk	£Call

Other Software

Alone in the Dark	£30.00
ANT Internet Suite 2	£112.00
Blitfolio 7 CD	£47.95
Blinds	£24.95
Brake Horse Power	£85.90
The Cobalt Seed	£22.00
DarkWood	£22.00
DataPower	£110.50
DrawWorks 2	£20.40
Drifter	£30.00
Dune II	£31.00
Dune II CD	£45.00
Empire Soccer 94	£22.00
Fire & Ice	£17.50
Flashback	£24.00
Game On! 2.5	£15.00
Global Effect	£31.00
ImageFS 2	£45.95
Impression Publisher	£135.00
Impression Style	£88.00

Keystroke - £34.95

Kingfisher Ch. Micropedia	£64.95
Kiyeko	£34.50
My 1st Incredible Amaz. Dict.	£36.25
Ovation Pro	£174.50
Personal Accounts 3	£43.00
Photodesk Light	£125.00
Photodesk 2	£247.95
Play It Again Sam 1, 2 or 3	£22.00
Premier Manager	£22.00
Prophecy 3	£160.00
Proposal	£Call
Starfighter 3000	£26.00
StrongGuard	£25.00
Tanks	£22.00
TopModel	£109.95
Textease 2	£54.50
Talking Textease	£71.95
Undelete	£18.95
Virtualase	£23.50
The Way Things Work	£42.95

Books & Manuals

BBC BASIC Manual	£21.95
Impression Tutorial Guide	£9.95
RISC OS 3 PRM	£104.00
RISC OS 3 PRM V5a	£32.75

Cables

We do hundreds of different cables.	
Data switches are also available.	
3.5mm stereo jack to same (2m) (audio lead for additional output to Yamaha speakers etc.)	£4.95
MIDI cable (4m)	£5.25
MIDI cable (5m)	£5.95
MIDI gender changer - joins two MIDI cables together	£2.40
Null modem cable (2m)	£8.95
Null modem cable (5m)	£10.95
Two Phone plugs to same (e.g. PowerWave to Hi Fi) (1.2m)	£3.95
As above (5m)	£5.95
As above (10m)	£6.95
9 or 15-pin Scart leads	£10.95

Bargains

Other bargains are available.	
A3000 User/Analogue Port	£30.00
A3000 1-2Mb RAM	£10.00
A3010 1-2Mb RAM	£15.00
Acorn 14" mon. nylon cover	£4.95
10/10 Dinosaurs	£10.00
Carnage Inc	£10.00
Sleuth V.1	£35.00

We will attempt to match or beat any advertised price - even special offers.

All prices INCLUDE VAT & UK carriage

Late Night Opening
Wednesday & Thursday
till 7.30pm

Open Sunday
11am to 4pm



FIRST
COMPUTER CENTRE

LOW COST DELIVERY

- 2-4 Week Days £3.99
- Next Week Day £5.99
- Saturday Delivery £14.99

Delivery subject to stock availability

SHOWROOM ADDRESS:
FIRST COMPUTER CENTRE,
DEPT. ACU, UNIT 3, ARMLEY PARKCT,
STANNINGLEY RD, LEEDS, LS12 2AE.

Please allow 5 working days for cheque clearance. Prices are correct at the time of going to press. Please check our latest prices before ordering. All sales are subject to our standard terms & conditions (copy available upon request). E&C.



Tel: 0113 231-9444

EASY ACCESS FROM M62, M1 and A1



From M62: Join M1. Follow signs onto M1. Take A43 Elms Road turnoff from M1. Follow signs for A51. This merges with the Armley Grady road. From M1: Join M62. Follow signs for A51. This merges with the Armley Grady road. From A1: Take the turnoff for A4. This merges with the A51 (by-passing town) which meets Armley Grady.

E-Mail: sales@firstcom.demon.co.uk WEB: www.firstcom.demon.co.uk FAX: 0113 231-9191 BBS: 0113 231-1422

LARGE SHOWROOM WITH FREE PARKING

AUTHORISED REPAIR CENTRE

We offer a **FREE** quotation on your Acorn or any peripheral (monitors, printers etc.). A delivery tariff of just £5.00 is charged or alternatively you can visit our showroom. We can also arrange a courier pickup at an additional cost of £11.00.

OPEN 7 DAYS A WEEK

Hardware

Acorn Risc PC's

StrongARM Risc PC (200Mhz)

- 4Mb HD1.2Gb & AKF60 £1399.99
- 4Mb HD1.2Gb/CD & AKF60 £1449.99
- 4Mb HD1.2Gb & AKF91 £1769.99
- 4Mb HD1.2Gb/CD & AKF91 £1819.99
- 10Mb HD1.0Gb & AKF60 £1689.99
- 10Mb HD1.0Gb/CD & AKF60 £1739.99
- 10Mb HD1.0Gb & AKF91 £2059.99
- 10Mb HD1.0Gb/CD & AKF91 £2109.99

Acorn A7000 Systems

- A7000 4Mb HD540 & AKF60 £1061.99
- A7000 4Mb HD540CD & AKF60 £1161.99
- Backplane A7000 £39.99
- Backplane A600/A700 £34.99
- Extra Slice Case £115.99
- Extra Slice Case no PSU £89.99

PC Cards With Risc PC Separately

- SX-33 £115.99 £233.99
- DX2-66 £174.99 £292.99
- DX4-100 £233.99 £350.99
- 5x86 £350.99 £468.99

Microvitec Branded Multi-Scan Monitors

- 1438, 14" .28dp Only £259.99
- 1701, 17" .28dp Only £338.99

Software

Entertainment Software

- Alone in the Dark £25.99
- Anagram Genius £17.99
- Black Angel £26.99
- Burn Out £23.99
- Cannon Fodder £22.99
- Cobalt Seed £22.99
- Cyber Chess £26.99
- Darkwood £26.99
- Fist Lore £21.99
- FTT Formula 2000 £23.99
- Global Effect £29.99
- High Risc Racing £26.99
- Logic Mania £21.99
- Rick Dangerous £14.99
- Saloon Cars Deluxe £26.99
- Shuggy £22.99
- SimCity 2000 (A5000) £32.99
- SimCity 2000 (RiscPC) £32.99
- Simon the Sorcerer £34.99
- Star Fighter 2000 £26.99
- Spoolleed Fantasy £23.99
- The Real McCoy 2,3,4 or 5 £26.99
- Tanks £22.99
- Virtual Golf £22.99
- Virtual Golf Wavelength £19.99

Application Software

- Arc Comm 2 £53.99
- Arc Fax 1,2 £37.99
- Arcterm 7 £65.99
- Artworks 1.54 £115.99
- Hearsay II £75.99
- Home Accounts £31.99
- Copernicus Economy £72.99
- Impression Style £72.99
- Impression Publisher £117.99

Sibelius 6 Version 3 £174.99

- Sibelius 7 Student ver3 £544.99
- Sibelius 7 Version 3 £999.99
- Termite Internet £84.99
- Titler £83.99
- Touch Typing £34.99
- Turbo DriverBJ/Eps/HP £46.99

Educational Software

- Badger Trails £42.99
- Chrysal Rain Forest £42.99
- French Learning Series £19.99
- Oxford R/T Tree Stage2 £39.99
- Oxford R/T Tree Stage3 £39.99
- Rosie & Jim (Sneezes) £11.99
- Rosie & Jim (Duck) £11.99
- 10/10 Dinosaurs £13.99
- 10/10 Driving Test £13.99
- 10/10 Early Essentials £13.99
- 10/10 Essential Maths £13.99
- 10/10 Essential Science £13.99
- 10/10 English £13.99
- 10/10 French £13.99
- 10/10 German £13.99
- 10/10 Junior Essentials £13.99
- 10/10 Maths Algebra £13.99
- 10/10 Maths Geometry £13.99
- 10/10 Maths Numbers £13.99
- 10/10 Maths Statistics £13.99
- 10/10 Spelling £13.99

10/10 Education Series Any 2 for £25.99

PC CD ROM Software

- Schubert £37.99
- Strauss £26.99
- Stravinsky £37.99
- Ancient Lands £26.99
- Dinosaurs £26.99
- Golf £26.99
- MSD 6.22 & Windows Works V3 for Windows £26.99

Reference

- Chambers Dictionary £35.99
- Grolier Encyclopedia £15.99
- Red Shift Astronomy II £37.99

Dorling Kindesley Titles

- Encyclopedia of Science £27.99
- Encyclopedia of Nature £27.99
- History of the World £27.99
- My Ist Incred. Dictionary £21.99
- PB Birthday Party £23.99
- Stowaway £24.99
- The Way Things Work £27.99
- The Utc. Human Body £27.99
- Virtual Reality Bird £23.99
- Virtual Reality Cat £23.99

Top sellers on CD-ROM

- Comm. & Conquer OEM £9.99
- C & C Red Alert £29.99
- Duke Nukem Atomic Pack £23.99
- Flight Sim 6 £39.99
- MDK Special Edition £29.99
- Ordnance Survey OEM £19.99
- Quake Mission Pack 1 £16.49
- Red Alert Counterstrike £9.99
- Settlers 2 OEM £9.99

StrongARM

Strong-ARM Processor Upgrade

£284.99

Limited Offer

Part exchange your ARM710 Processor for £25.00 or RiscOS 3.6 For £10.00

Acorn Spares

- Acorn Mouse (Original) £29.99
- PC Serial Mouse (Risc PC) £4.99
- RiscOS 3.11 ROMs only £89.99
- *2nd User RiscOS3.6 £29.99
- *2nd User ARM710 £59.99
- *Both Together £74.99
- MIDI Max (RiscPC & A5000) £80.99
- MIDI User (A30x0 & A4000) £67.99
- MIDI Cables (2x3m) £9.99

Repair & Fitting Service Available

2.5" H/Drives

CONNER FUJITSU Seagate

- 120Mb 2.5" IDE £80.99
- 170Mb 2.5" IDE £85.99
- 210Mb 2.5" IDE £104.99
- 250Mb 2.5" IDE £119.99
- 420Mb 2.5" IDE £129.99
- 540Mb 2.5" IDE £139.99
- A3010/3000 IDE Card* £69.99

*When Bought With Drive

3.5" H/Drives

Quantum TOSHIBA Seagate

- 1.2Gig 3.5" IDE £144.99
- 1.7Gig 3.5" IDE £159.99
- 840Mb 3.5" SCSI £199.99
- 1.2Gig 3.5" SCSI £233.99
- 3.2Gig 3.5" SCSI £296.99
- A3/A400 IDE Card £80.99
- A5000 2nd H/Drive Kit £19.99

Memory Modules

- RiscPC/A7000 4Mb £20.99
- RiscPC/A7000 8Mb £38.99
- RiscPC/A7000 16Mb £87.99
- RiscPC/A7000 32Mb £158.99
- RiscPC VRAM 2Mb £11.99
- With 1Mb Trade In £122.99
- A3010 1Mb to 2Mb £44.99
- A3010 1Mb to 4Mb £94.99
- A3020/A4000 2-4Mb £74.99
- A5000 2Mb to 4Mb £72.99

Part X. your old Memory Call....

Printers

Canon

- Canon BJ30 £159.99
- Compact Portable mono printer, 30 page ASF built in
- Canon BJC700 Colour £185.99
- High quality Portable colour printer, 30 page ASF
- Canon BJ240 Colour £150.99
- New Colour Printer, 720 dpi
- Canon BJC4200 Colour £199.99
- New Version, with Photo Realism Cartridge Option
- Canon BJC4550 Colour £369.99
- A3 Version, with Photo Realism Cartridge Option
- Canon BJC620 Colour £290.99
- New Enhanced, dedicated colour printer, 720x720 dpi

EPSON

- Epson Stylus 400 colour £211.99
- 720x720 dpi, 3ppm Colour, 4ppm Mono printing
- Epson Stylus 600 colour £284.99
- 1440 dpi, 4ppm Colour, 6ppm Mono printing
- Epson Stylus 800 colour £397.99
- 1440 dpi, 7ppm Colour, 8ppm Mono Printing
- Epson Stylus Pro £349.99
- 720 x 720 dpi, 4 Colour Piezo Head
- Epson GT-5000 Scanner £269.99
- Entry level A4 Colour Flatbed Scanner
- Epson GT-8500 Scanner £450.99
- 400dpi Fully featured A4 Colour Flatbed Scanner

HP

- HP Deskjet 400 Colour £134.99
- Full Colour Printer, Very Low Price, 600x300 dpi
- HP Deskjet 690 Colour £249.99
- New Colour Inkjet, 600x600 dpi Mono, 600x300 dpi Colour
- HP Deskjet 820 £279.99
- 7 ppi/m Mono, 2 ppi/m Colour
- HP Deskjet 870CXI £339.99
- 7 ppi/m Mono, 2 ppi/m Colour
- HP SL6/L Jet £279.99/£334.99
- 4 ppi/m 600dpi, 1Mb of RAM, 4 ppi/m 600dpi, 1Mb of RAM
- HP 6P Laserjet £564.99
- 8 ppi/m 600dpi, 2Mb of RAM

CITIZEN

- ABC Colour Printer £129.99
- 24 Pin Dot Matrix Col. Printer, Tractor Feed Unit £34.99
- Citizen Project-IIC £129.99
- Colour Inkjet 100x300 dpi, 70 Sheet ASF
- Citizen Printiva 600C £371.99
- Micro-Dry Process 1200x600 dpi mono, 600x600 dpi Col.
- Citizen Printiva 1700C £499.99
- Same as 600C, but also has 600 dpi scanner built in.

ACCESSORIES

- Printer Switch Box 2 way Inc. cable £14.99
- Printer Switch Box 3 way Inc. cable £19.99
- Printer Switch Box 4 way Inc. cable £22.99
- 1.8 Metre printer cable £4.99
- 3 Metre printer cable £6.99
- 5 Metre printer cable £8.99
- 10 Metre printer cable £12.99
- Inkjet Printer Cleaning Kit £9.99
- Personal Computer Cleaning Kit £9.99

Epson

- Epson 200 8 Hr. Warranty £46.99
- Epson 500 8 Hr. Warranty £75.99
- Epson Iron-On Transfer Paper (10) £12.99
- Epson 720 dpi Paper Pack (100) £12.99

Canon

- Canon T-Shirt Transfer Pack £12.99
- Canon BC-06 Photography Carts. £24.99
- Canon BC-06 Photography Kit £24.99
- Canon BC-09 Fluorescent Cartridge £24.99
- Canon BC-22 Photography Carts. £32.99
- Canon BC-22 Photography Kit £37.99
- Canon BC-29 Fluorescent Cartridge £32.99
- Canon HR-101 Inkjet Paper (200) £23.99

HP

- HP DJ690/694 Photography Cart. £29.99
- HP DJ690/694 Photo Image Kit £43.99
- HP DJ690/694 Photography Paper £9.99
- HP DJ690/694 Banner Paper £9.99
- HP Deskjet Bright White Paper (500) £10.99
- HP Premium Glossy Paper (10) £9.99

Multi Media/CD ROM

RISCPC's (RISCOS 3.6&3.7)

- 8x Goldstar R580B £79.99
- 6x Goldstar R560B £69.99
- 4x Goldstar R542B £49.99
- Dual IDE cable £9.99

RISCPC's (RISCOS 3.5 only)

- 8x Optics Stingray £89.99
- 6x BTC CD drive £54.99
- Comes with software driver disk
- Dual IDE cable £9.99

CUMANA

- Indigo CAA340i Quad Speed CD Drive £170.95
- Indigo CAA340ia Quad Speed CD Drive £229.99
- Indigo CAA300i Dual Speed CD Drive £134.99
- Oscar (Parallel) 4 Speed CD Drive £287.99

Acorn CD Software

- APDL Clipart DTP 1 £18.99
- APDL Clipart DTP 2 £18.99
- APDL Clipart DTP 3 £18.99
- Artworks Clipart 1/2 £20.99
- Cars-Maths in Motion £58.99
- Childrens Micropedia £87.99
- Dune II £41.99
- Goldilocks £45.99
- Grannys Garden £34.99
- Hutchinsons Encyclopedia £31.99
- Oxford Reading Tree £39.99
- PCDL 1 (Datafile) £24.99
- PCDL 2 (Datafile) £24.99
- PCDL 3 (Datafile) £24.99
- PCDL 4 (APDL) £14.99
- PCDL 2 (APDL) £14.99
- Simon the Sorcerer £41.99
- Photobase Landscapes £55.99
- Understanding the Body £50.49

Modems

PRIMA V34+ Fax Modem

Superb Price/Performance

33,600 bps, BAPT Approved

Connecting Cable and Comms Software Provided, Inc. Arcterm 3, Grapevine & Zini software

Also available:

- Arc Comm 2 £53.99
- Arcterm 7 £65.99
- Arc Fax 1.12 £37.99
- Hearsay II £75.99
- Termite Internet £84.99

Sportster Vi

- Call Discrimination
- Personal Voice Mail
- Fax on Demand • Class 1 Fax
- 14,400 Data/14,400 Fax £79.99
- 33,600 Data/14,400 Fax £161.99

The UK's Best Selling Modems

Cables

Cables and Adaptors..Lots more in stock

- Phone Line Ext. 5M/10M/15M £6.99/£8.99/£10.99
- Dual Socket Adaptor.....£6.99
- Telephone Socket adaptor BT-US/US-BT £4.99
- Printer Cables 1.8M/5M/10M £4.99/£11.99/£19.99
- Modem Cable/Null Modem £9.99/£9.99
- 2x3M MIDI Cables £9.99, Dual IDE cable £9.99

CLEARANCE SALE

Limited Stocks Available

- SupraFax Modem 2400 £19.99
- SupraFax Modem 14.4 £49.99
- SupraFax Modem 28.8 £79.99
- Sportster 14.4 Vi Ext. £79.99
- Sportster 28.8 Vi Int. £79.99
- GVC 14.4 Voice Internal £29.99

Consumables

Ribbons

- Citizen Swift/ABC mono £12.99
- Citizen Swift/ABC colour £12.99
- Star LC90 mono ribbon £4.99
- Star LC10/100 mono £3.69
- Star LC10/100 colour £7.99
- Star LC240c colour £8.99
- Star LC240c mono £8.99
- Star LC240/300 Colour £13.99
- Re-Ink Spray for mono ribbons £9.99

Most Other Makes AVAILABLE

Premier-Ink Cartridge Refills

Save a fortune in running costs with your ink bubble jet. Compatible with the HP Deskjet series, Canon BJ10/20/60/130/200/300/330, Star SJ48, Citizen Printer and many others.

Full range of colours available.

- Single refills (22ml) £6.99
- Twin refills (44ml) £12.99
- Three colour kit (66ml) £19.99
- Full colour kit (88ml) £27.99
- Bulk refills (125ml) £24.99

Printer repair specialists call for quote

Ink Cartridges

- Canon BJ10/Star SJ48 £17.99
- Canon BJ200/230 £18.99
- Canon BJ30 (3 pack) £12.99
- Canon BJC 70 mono (3 pack) £10.99
- Canon BJC 4000 colour (single) £16.99
- Canon BJC 4000 mono (single) £6.99
- Canon BJC 4000 mono high cap. £8.49
- Canon BJC 6000 mono high cap. £6.99
- Canon BJC 6000 colour £24.99
- Citizen Printiva Std. colours £7.99
- Citizen Printiva Metallic colours £24.99
- HP Deskjet 500/550 Mono £24.99
- HP Deskjet 660 double mono £23.99
- HP Deskjet 660 colour £25.99
- Epson Stylus mono £13.99
- Epson Stylus colour £27.99
- Epson Stylus Col. 115/820 Mono £17.99
- Epson Stylus Col. 115/820 Colour £24.99
- Star SJ144 mono/colour (single) £8.99

Paper

- Fanfold (tractor feed) 500 sheets £6.99
- Fanfold (tractor feed) 1000 sheets £12.49
- Fanfold (tractor feed) 2000 sheets £21.49
- Single sheet 500 sheets £6.99
- Single sheet 1000 sheets £12.49
- Single sheet 2000 sheets £21.49

Disks

- Bulk DSDD £28.99
- 10 x £3.49 100 x £26.99
- 30 x £9.99 200 x £49.99
- 50 x £14.99 500 x £114.99
- Branded DSDD £22.99
- 10 x £4.99 100 x £41.99
- 30 x £13.99 200 x £76.99
- 50 x £21.99 500 x £175.99
- Bulk DSHD £24.99
- 10 x £3.99 100 x £29.99
- 30 x £10.99 200 x £55.99
- 50 x £16.99 500 x £129.99
- Branded DSHD £20.99
- 10 x £5.99 100 x £44.99
- 30 x £15.99 200 x £82.99
- 50 x £23.99 500 x £189.99
- Disk labels x500 £6.99
- Disk labels x1000 £9.99



critical point. 'I'm a great believer in delegation and giving people freedom and responsibility and I've tried to encourage that culture in the organisation, a culture of openness. If people think I'm talking out of the top of my head they should feel free to tell me. They have to be prepared to face me down in a logical argument, but I'm willing to have that argument.'

Above all, Lee has been working to encourage Acorn employees to generate good ideas and enable those ideas to flourish. He admits he is no technologist, but sees an important role for himself in applying common sense to technical ideas from a business point of view. Technical brilliance isn't enough, tough – ideas good for Acorn have to have commercial purpose as well.

Chris Cox

A good example of this is the job of Chris Cox, VP of the product business unit. Chris Cox's job is a real challenge. His responsibility is to find markets for products among those who have been faithful to Acorn for many years or those new to Acorn who can find an advantage in using Acorn's proprietary platform. Pessimists regard these markets as inevitably withering into insignificance. Even David Lee described the market sector Cox is responsible for as "not having long-term strategic importance given the direction that Acorn are now taking."

However, Lee is giving Cox every opportunity to serve the loyal following, epitomised by the Acorn Clan. "Chris knew well the challenges that he was taking on. It was made quite clear to Chris, but perversely when you say something is not of long-term strategic importance it starts to do well, which it has," says Lee.

Cox is under no illusion. Although Acorn appear to have a bright enough future supplying RISC OS computers for the needs of Xemplar, the educational computing solutions joint venture company with Apple, the market for enthusiasts and other general Acorn platform users is indeed comparatively small. However, the Clan has grown steadily and there is still a steady stream of product being snapped up by the faithful, much to the surprise of many. "There have been several different things actually, one is the recognition now of how important the

product business is to the technology side and vice versa. One of the key selling points Acorn has for its technology is that we actually know how to build products. So we're not just another design operation." This means Acorn demonstrate real products to prospective clients, not just raw prototypes or, worse still, ideas which remain on paper.

**We actually know
how to build
products. So we're
not just another
design operation**

Another relatively new recruit coming from an arguably less glamorous part of the IT industry, marketing test and measurement equipment like oscilloscopes, Acorn made a big impact on Cox. "It certainly hit me – I was originally recruited to look after the enthusiasts market. These were my friends, you know – this was what it was all about!" Cox had owned a BBC Micro a long time ago, "to mess about with," but just like Lee, he was totally unprepared for the Acorn experience when he joined the company two and a half

years ago.

As a Regan Files interview with Cox revealed, previous employment did have its moments – he was on an oil rig which spectacularly caught fire, for example, but his typical working environment comparatively mundane. "I come from an industrial marketing background where you have to shout and scream and leap up and down get anybody to even look at you. And you walk into this market and everybody is scrutinising what you are doing and drawing all sorts of conclusions and you think, whoa!, this is very different."

Barely a year had passed after Cox joined Acorn and the first major shake-up under David Lee happened. Cox reflects that while he was a survivor of the job cuts, he took a more practical comfort from them as it was clear that the changes were not for change's sake or to save a bit of money; these were major structural changes which would redefine Acorn as a company. Cox has an interesting time ahead and he has already managed to secure some exciting projects, like the commissioning of a new IOMD chip which is crucial to next-generation RISC OS computers, plus the launch of a new Acorn portable model, the core components of which were borne out of a technology development contract. Cox and his new assistant, Kerri Davies, are also planning to catch the attention of the considerable



number of loyal Acorn users out there who wouldn't necessarily think of themselves as 'enthusiasts.' So much for the 'dying market' cynics!

Steve France

While Chris Cox concentrates on products for more conventional Acorn markets, Steve France casts an eye over new vistas. Not to be confused with long-standing Acorn employee Alastair France – they're not related – Steve France is VP of marketing, a strategic marketing manager, at Acorn and is very much focused on Acorn's new generation of international customers looking to use Acorn's products or technologies in areas like networked multimedia and of course network computers. "What I'm about, as it were, is more forward looking business planning, I suppose you'd call it. In terms of what are the technologies we have, where are we going to be using those and what sort of technologies should we be looking at for developments in the future," explains France.

design engineer but has now crossed the divide into marketing. However, his engineering background gives him a very handy insight from the engineering perspective when planning marketing strategy.

"I found when I first moved into marketing from engineering you get a lot of sceptical people, especially when you talk to engineers. The general engineering view of marketing people is smoke and mirrors merchants. I found by subtly letting them know that I have a good understanding of engineering issues and what it's all about, I can generally talk to people and we can have good conversations; it's not case of down at the Janet and John level – it's at a level where we can get things done." France feels it's important to him to view the technology from a user's perspective in order to have a feel for what the customer is looking for. "I have a Risc PC on my desk and I view the thing very much as a tool. I look at and I ask what benefit does it give to me rather than how it's doing that. I was very much a *how it does it* per-

son when I was designing." Interestingly, France reflects Acorn's relatively new emphasis on sourcing new staff from a pool of talent wider than the Cambridge locale. He comes from Loughborough and used to work for a company specialising in DSP (digital signal processing) technology and before that a well-known company best known for telecommunications products like network switching equipment. France is trained as an electronics

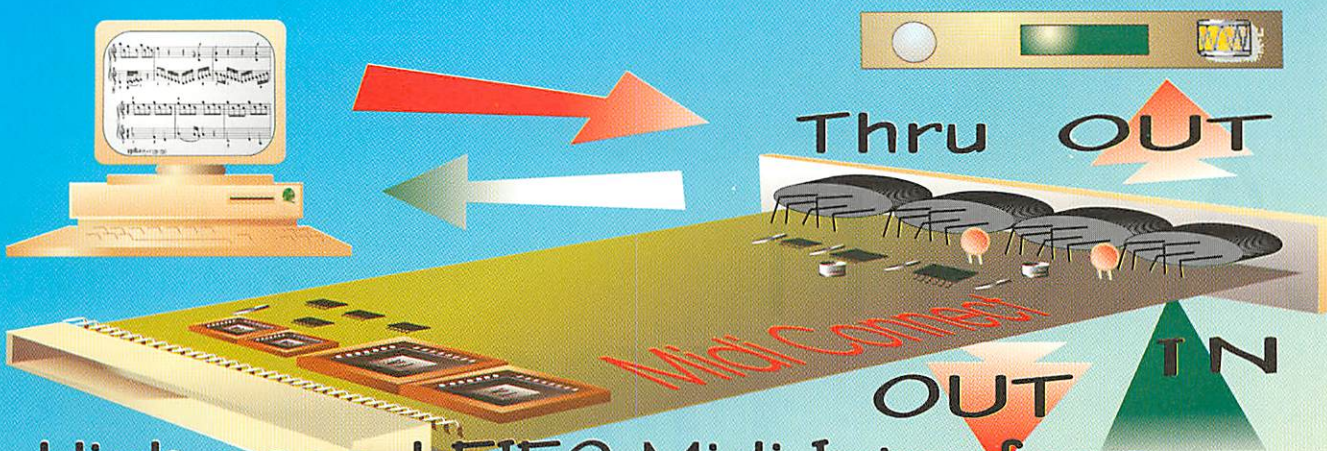
son when I was designing."

Like David Lee and Chris Cox, France was not aware of the Acorn community before he joined the company. However, unlike his colleagues he didn't find it a culture shock, though he concedes it was 'different'. He officially started at the beginning of January, but took a Risc PC home at Christmas to get to know the technology. Although he had been used to Windows from his previous jobs, it didn't take him long master RISC OS. While Cox comes across as an enthusiastic convert to the Acorn platform, France doesn't seem to have been bitten by the Acorn bug. His job is to examine the technologies available and persuade potential customers that it can meet their needs.

Compared to his time in the DSP industry, where there were a small number of players and the market was pretty well clear cut, France was at first taken aback by the sheer scale of the industry Acorn had jumped into. "There's so many more people involved in this and of course everybody has their own ideas on how to move forward and to begin with my difficulty was actually trying to build a framework upon which to hang it all." This successfully done, France was able to confidently identify what he calls 'the nub of it all.'

In his words, he has to extract the benefits from the features. As fabby as a Risc PC is, when a potential industrial customer is looking for, say, technology solution to a something like an information kiosk or a network computer, you'd be wasting their time persuading them that a Risc PC is the best thing since sliced bread. France says: "In the Acorn environment now we're talking to a wide range of large consumer electronics-type people. We're talking about things and in terms of trying to sell our technology it's important to be able to say to these people you need this – because... and the future trend of this technology is this... which gives you that..." It's all the more necessary because the technology is changing so fast, says France, it's very easy to get side tracked.

• Next month we'll be talking to Peter Bondar, one of the chief architects of the new-look Acorn, plus we'll be exploring the relationship with Xemplar through the eyes of its managing director, Brendan O'Sullivan.



High speed FIFO Midi Interface

Internal fitting
for all Systems with a backplane

Midi Connect

Tested with:

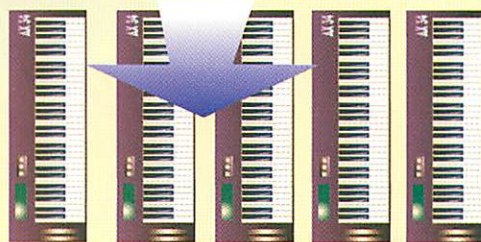
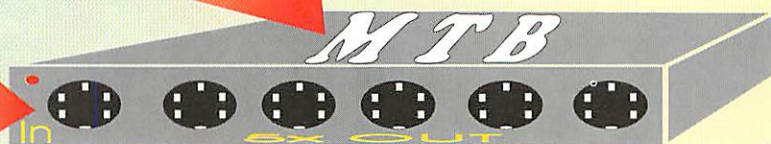
Sibelius
Software

16 Channels IN
32 Channels OUT
+ 16 Thru Channels

£75 Incl.



Midi Thru Box



£39 Incl.

The MTB is designed to
provide you with 5x Midi Outs,
thus giving you access to further sound modules

CONNECT 32

100% Acorn SCSES Compatible uses Recognised Rise & DOS formats

High Data-Transfer-Rate

fast SCSI II

Upto 6.5 MB/s

SCSI Power

DMA

Plug & Play

£129 Incl.

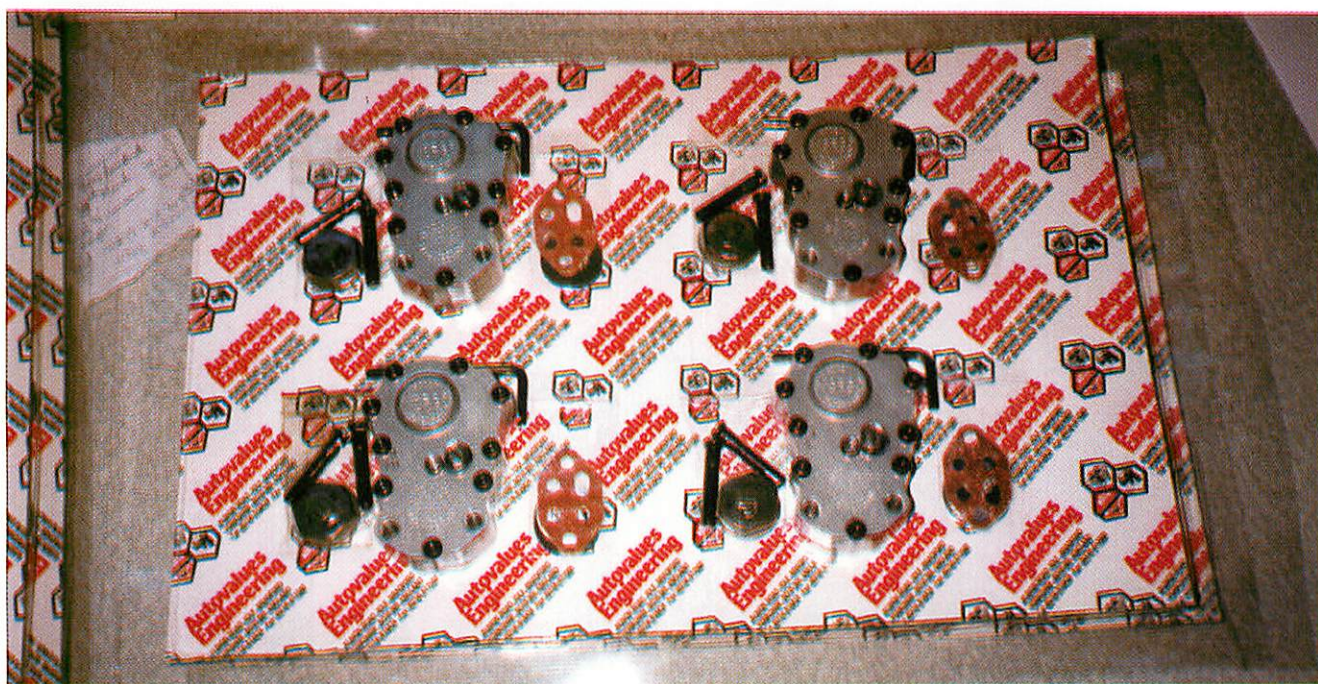
ACE Baroper Bahnhof Str 55
44225 Dortmund Germany
T. 0049 231 7274260
F. 0049 231 7274261



<http://www.acebase.de>

Email: acesales@plaza-project.de

Acorn motors



The finished product. Oil pumps for Triumph motorbikes

Mike Tomkinson finds out how Autovalue Ltd use Acorn computers as an essential part of their business

I have been editing the Business Page and writing various articles about businesses and business-related software for *Acorn User* for well over a year. I hope in that time I have been able to convince at least some of you that Acorns and their software are viable and practical alternative computers in a range of business environments.

However, it is recognised that a valid criticism is the paucity of examples of good practice in the area of manufacturing – the production of goods rather than ser-

vices. We all know that an Arc can hold its own in an office but what about a factory?

Redressing the balance

It is intended that this story will go some way to redress that balance. Perhaps a little history is appropriate before we begin – before the modern Archimedes was the venerable BBC B.

It may look crude from our modern perspective but many of today's programmers cut their teeth on it and it had, among many others, the enormous advantages of being able to accept a large number of devices via its many ports and its general expandability. It really was a wonderful machine and way ahead of its time. The relevance of this fact will appear later.

On the shop floor

While researching a review of business software some months ago I met Graham Waterworth of RaspSoft who happened to mention, in passing, that he had written

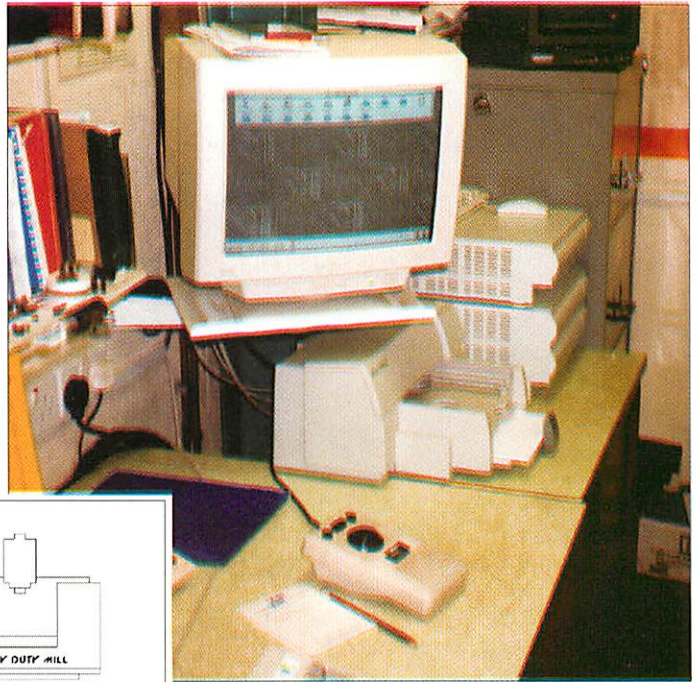
some programs and interfaced some Computer Numeric Control lathes and milling centres to a Risc PC at the factory he runs.

Would I be interested in having a look? Would I! So a few weeks later – Good Friday to be exact – I set off for the charming suburb of Bradford called Idle. Let's get the jokes out of the way now – yes it does exist and yes there is an Idle Working Mens Club. It is also the home of Autovalue Engineering Ltd.

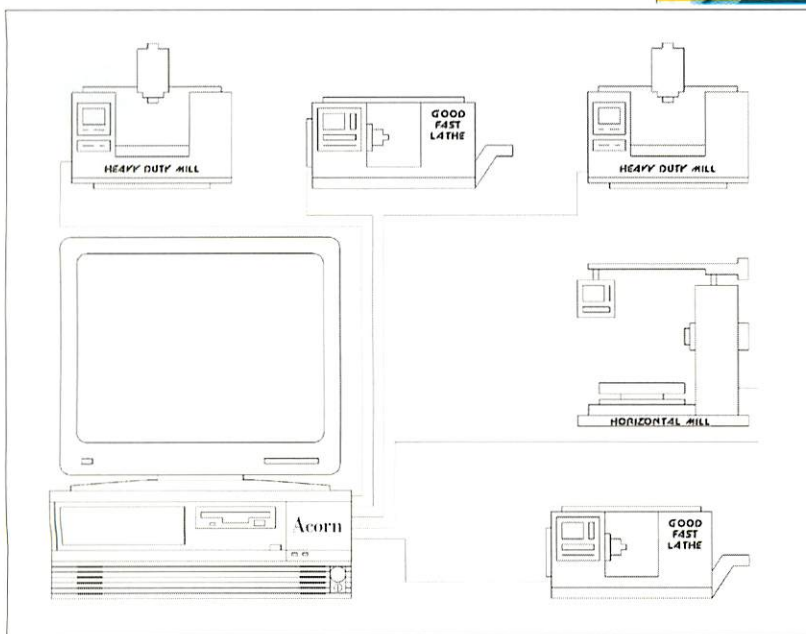
Autovalue were founded by Graham's father in 1964 and produce a very wide range of machined parts mainly for the automotive industry. They also produce machined components for other areas especially where large numbers are required and high quality is essential. The company employ approximately 15 people working on a variety of modern CNC lathes (see Jargon box) and milling centres.

Essentially there is nothing too remarkable about this – it is similar to hundreds

on



The Risc PC in a manufacturing environment



of other small to medium-sized engineering works. Those which survived the massive downsizing of the manufacturing base in the 1980s deserved to survive. They were very hard times for all UK manufacturing industry. In this particular case a combination of Yorkshire thrift and good management certainly helped keep Autovalues solvent.

Autovalues Triumph

Autovalues survived because, among other reasons, they established a good name in the production of oil pumps and cylinder conversion kits for motorbikes and Triumphs in particular. The trade name they established was Morgo and you can see the finished product in one of the accompanying photographs.

Triumph went out of business and then came back but they also managed to produce an awful lot of motorbikes in the meantime. The actual oil pump was designed using an Archimedes 440 with Oak PDT. This program allows the production of drawings to six decimal places and is the only design program for the Arc which is accurate to this necessary level for the production of a .DXF file capable of

export into a CAM system (see Jargon box). This is the one area where Autovalues are forced to use a PC as the Arc has no viable CAM system.

The thing I also found particularly interesting is the use of old imperial measurements in engineering. Millimetres have a place but so do the thousands of an inch. This is not only because Autovalues produce bits for older British motorbikes but also because they produce for the American market which is not metricated. The use of a sophisticated Co-ordinate Measuring Machine (CMM) sits alongside micrometers to give the desired level of accuracy in modern engineering whether in metric or imperial measurements. The worlds of BSF and BSW (see Jargon box) are alive and well and living in a suburb of Bradford.

Like all good systems Autovalues Direct Numeric Control system was born out of a need to solve a particular problem or problems. The CNC lathes have very little actual in-built storage capacity. Every time a program was developed for a particular task it needed to be uploaded to the CNC lathe or downloaded from it via an old, slow Epson portable computer. No nice big

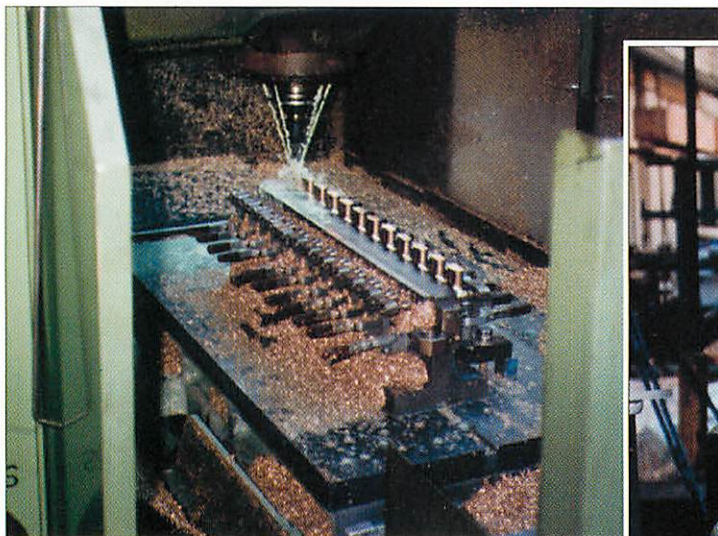
hard drives or convenient floppies and certainly no large amounts of RAM. A CNC lathe may be clever in what it does but they are not overly endowed in the memory department unless you are prepared to pay megabucks for proprietary memory boards.

The numeric control programs are actually not very sophisticated, they simply give instructions to the lathe or milling machine. They are a series of measurements giving the relative positions, to a datum point, of a cutting tool. However, they can be quite large programs and are therefore time consuming to develop and upload/download. They require storage because not only may they be required in future but also because the CNC lathe has little internal storage and the program may therefore need to be loaded in parts for a complex job. This is rather aptly called drip-feeding in engineering.

Graham realised there must be a better way and contacted specialist firms for quotes to purchase a solution. To say they were expensive is an understatement and so Graham set about using his BBC B experience to write his own solution.

Each lathe and milling machine has a RS232 or equivalent port and so it was a relatively easy job to network the engineering equipment to a Risc PC 700 and have that act as a fileserver for the

Acorns in business



A milling machine hard at work



A CNC control panel

machines. This stores the programs and transmits them to the required machine on demand. Each program is stored as a number in its own dedicated directory for a particular machine. This is because usually each lathe or milling machine has particular strengths and weaknesses or subset of CNC commands. A program which would work on one machine might not necessarily work on another.

As many of you will not have experience of such programs I have included two small but useful utility programs on this month's cover disc. These would normally be distributed with the DNC Link and have been produced by Graham. The first is called *!PCD_Holes* which calculates evenly spaced holes on a given pitch circle diameter. The program is easy to use and self-explanatory although there is also a help file built-in. The second program is called *!Grooves* and produces actual numeric control code to drive a lathe to create various grooves. If you run it and save the output as a text file you can see an example of a numeric control output file. It also has a comprehensive built-in help file and some suggested dimensions. Both programs are also available on the RaspSoft Web site.

Of course the CNC lathe can also then save back to the Risc PC, hence Direct Numeric Control or DNC. The elegance of the solution lies in its essential simplicity although the hard work lay in the development of the system. Graham tackled the original problem in a modular fashion using one computer and one lathe. Having seen that it worked and worked well he then expanded the system.

The development of the system and the writing of the software was made easier by his earlier BBC B experience and the knowledge that if a PC could do it then so could a Risc PC. The programs all run in

native Acorn mode – the computer is not even fitted with a PC card. At present the only limiting factor is the number of serial ports that can be fitted to a Risc PC – currently 24 or three times eight per backplane. If you had more lathes or milling centres you would need a second Risc PC.

The numeric control programs can be developed on any old Archimedes by the machine operators and also sent to the controlling Risc PC. Autovalues has an old A310 for this very purpose. Does it work? Well I have seen it and not only does it work but it works well and has saved Autovalues thousands of pounds.

In the office too

Acorns are not only used at Autovalues for CNC/DNC and product development drawings. They are also used in the offices for invoicing and stock control using *Prophet 3* and also for payroll using RaspSoft's *!HardCash* software.

Graham has set up a Web site and e-mail links which also save money by allowing very cost-effective advertising and cheap communication of the company product list, particularly to the USA and as far afield as New Zealand. It is much cheaper than using a fax machine and is good justification for the time and effort in setting up Web sites and using the Internet in a business context. It costs over £4 to send a A4 fax to New Zealand. It costs a local phone call to send an e-mail anywhere in the world.

In all Autovalues uses nine Acorns of various shapes and sizes ranging from the oldest A310 to the latest StrongARM equipped Risc PC. This is not a company which makes much use of PCs and would make even less use of them if it could.

Having now produced a fully working system Graham and his friend Sid Dine of

RaspSoft Business Software have decided to make it more widely available by marketing it as a package called *DNC Link*. A basic system comprising software and a three port card to run three CNC machine tools will cost £499. Consultancy and cabling can be arranged via Raspsoft for those wishing to purchase a full installed system.

AU

Contacts details

Company: RaspSoft Business
Address: 15 Market Street, Wibsey, Bradford, BD6 1LR
Tel: (01274) 671922
E-mail: raspsoft@argonet.co.uk
WWW: <http://www.argonet.co.uk/users/s.dine>

Jargon box

CNC – Computer Numeric Control
The use of a dedicated computer to control lathes etc
DNC – Direct Numeric Control
The use of a general purpose computer to store machine programs for use on a CNC lathe
CAM – Computer Aided (Assisted) Manufacture or Machining
DXF – Document Exchange File
CMM – Co-ordinate Measuring Machine
A highly accurate measuring machine which uses a probe to take measurements
BSF/BSW – British Standard Fine and Whitworth
Imperial thread sizes

A3000 upgrades

Memory

1-4Mb	£68 (79.90)
(See also the "2nd user" section)	
2-4Mb upgrade pack	£45 (52.87)
4-8Mb	£135 (158.62)

The above upgrades are all constructed on four-layer boards, as recommended by Acorn. Gold plated connectors are used for reliable contact with the A3000 main board. There are no clips or wires, and no soldering is required (except 8Mb). Full instructions supplied. Some older types of 2Mb board cannot be upgraded to 4Mb, but we offer a trade-in allowance. Please phone for details.

Hard drives

A range of internal hard disc upgrades is available. The upgrades simply plug into the internal expansion slot. Also suitable for the A3010.

210Mb	£135 (158.62)
340Mb	£149 (175.07)
420Mb	£169 (198.57)

RISC OS 3	£39 (45.82)
ARM3 (25MHz)	£119 (139.82)
(Dealer fitting recommended for the ARM3)	

A3000 4Mb RAM £68 (79.90)

RISC PC 16Mb SIMM £65 (76.37)

A5000

Memory

2-4Mb	£63 (74.02)
4-8Mb	£135 (158.62)

Dealer fitting for the 8Mb upgrade is recommended for the 25MHz A5000.

A3020/A4000

Memory

2-4Mb	£57 (66.97)
-------	-------------

Hard drives

210Mb	£79 (92.82)
340Mb	£89 (104.57)
420Mb	£115 (135.12)

A400/1

Memory

Per Mb (up to 4Mb)	£30 (35.25)
4-8Mb	£135 (156.62)
RISC OS 3	£39 (45.82)
ARM3 (25MHz)	£119 (139.82)

Hard drives. For prices, refer to the A310 section.

Various

Alsystems SCSI 2	£170 (199.75)
ARM3	£119 (139.82)
RISC OS 3	£39 (45.82)
MEMC1a	£35 (41.12)
MEMC1a (2nd User)	£20 (23.50)
Hard disc cradle	£6 (7.05)
Fan filters (pack of 5)	£3 (3.52)
RISC OS manuals, no vat	£22
Dongle dangle	£6 (7.05)
Chip extractor tool	£4 (4.70)
(for eg MEMC, ARM2)	
CDFS upgrade for Oak SCSI card	£25 (29.37)

The following item is reduced to clear. Please phone to check availability.

Wordworks	£23 (27.02)
-----------	-------------

How to order: The VAT inclusive amount is shown in brackets. Cheques made payable to IFEL. Most Credit cards accepted, and Switch. Official orders welcome.

Educational and quantity discount available. Dealer enquiries welcome.

A3010 upgrades

Memory

1-4Mb	£75 (88.12)
1-2Mb	£35 (41.12)
2-4Mb	£59 (69.32)

The 4Mb upgrade is constructed on a compact four-layer board. No soldering is required. Full instructions supplied.

Hard drives

A range of internal hard disc upgrades is available. The upgrades simply plug into the internal expansion slot. For prices, refer to the A3000 section.

RISC PC

SIMMs...(please phone for latest prices)

4Mb	£14.40 (16.92)
8Mb	£29 (34.07)
16Mb	£55 (64.62)
32Mb	£107 (125.72)

16Mb SIMM to 32Mb upgrade £63 (74.02)

(By upgrading your 16Mb SIMM to 32Mb you don't lose a SIMM socket. Original 16Mb SIMM must be returned to IFEL and the type must be suitable - most are. Please phone to check first or ask for our free leaflet.)

RAM packs for upgradable SIMMs

4Mb-8Mb	£24 (28.20)
16Mb-32Mb	£65 (76.37)

Each pack consists of 8 chips which simply plug into empty sockets. Instructions supplied, no soldering needed.

VRAM modules...

1Mb	£49 (57.57)
2Mb	£88 (103.40)
1Mb-2Mb upgrade	£55 (64.62)

A310

Memory

4Mb	£79 (92.82)
4-8Mb	£135 (158.62)

Backplane (4-slot, four-layer)
£49 (57.57)

Fan for above	£8 (9.40)
RISC OS 3	£39 (45.82)
RISC OS carrier board	£12 (14.10)
ARM3 25MHz	£129 (151.57)
MEMC1a	£35 (41.12)

Hard drives

850Mb IDE	£125 (146.87)
1Gb IDE	£135 (158.62)
IDE controller	£65 (76.37)
1Gb SCSI	£199 (233.82)

2nd User

Please phone to check availability.

A3000 1-2Mb	£15 (17.62)
A3000 RAM board	£5 (5.87)
(ie bare board, no chips)	
A5000 2-4Mb	£38 (44.65)

Spares/Repairs

We carry stocks of most replacement chips for the Acorn range. (MEMC, VIDC, IOC and most memory devices). We can also fit any upgrades and offer a computer repair service.

All products (except some marked "2nd User") are fully guaranteed for 12 months. All items normally carried in stock have a 14-day money-back guarantee. Please note that the cost of memory products varies - please phone for the latest pricing.

IFEL

21, Glenfield Road, Glenholt, Plymouth PL6 7LL. Tel (01752) 777106. Fax (01752) 777830



Acorn WORLD

31 October - 2 November 1997

Wembley Conference and Exhibition Centre
HALL 3



A WORLD OF OPPORTUNITIES

FOR INFORMATION ABOUT EXHIBITING

CALL 0701 0709 901

Web Site: <http://www.eps-events.com/acorn-world>

Sponsored by

Acorn 


XEMPLAR
EDUCATION

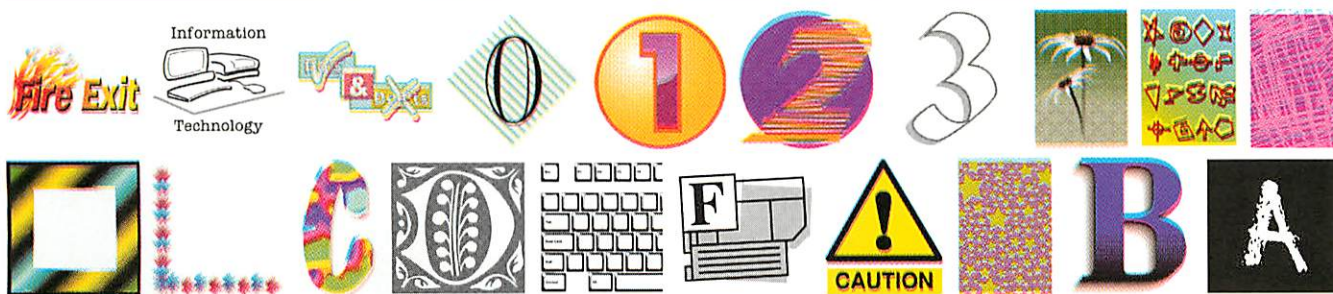
Supported by

ACORNUSER



TheGuardian

Something for everyone



Jack Kreindler looks at the latest clipart collection from SmartDTP – with the help of Mr Clippy

PublishArt 3 is the third (surprise, surprise) of Smart DTP's clipart collections. It is not an image or illustration bank but a DTP resource featuring a massive 2,790 files for use in DTP, ranging from backgrounds to, well, almost everything the average DTP user would need.

All the graphics are in vector file format which makes them scaleable and smaller in most cases than the average uncompressed bitmap. Even so, the magnitude of storage space required for 2,790 *ArtWorks* files, plus the further 2,790 identical files in *Draw* format and a whole load of demos, fonts and extra utilities make the CD-ROM medium most appropriate. Fifteen high density compressed discs is the alternative arrangement which takes up 60Mb of hard disc for the clipart alone.

Despite the extensive content of the collection, two things are missing from the product which every good clipart package should have. This first is a browser and the second is a printed manual documenting all the graphics available. A solution is on offer, however, which aims to solve these two problems. His name is *Mr Clippy*, an easy-to-get-on-with, useful but somewhat bizarre character to have onboard your Acorn.

Mr Clippy is iSV's literally all-singing all-dancing clipart viewer as proclaimed in the song he sings on the animated start-up sequence "... I store clipart for you. I store vectors and bitmaps too, oooh." This aria together with quite the most ghastly textured window background ever seen on this platform can be disabled, thankfully.

The misspellings of 'it's' as in, 'Oh No, Its Mr Clippy' found on the box and in the manual, are not cured by any options.

Draw, Artworks, JPEG, GIF, TIFF, Clear, Hawk Digitiser, Time Step, Degas, RayShade, Windows Bitmaps, ProArtisan and Sprites can be used with Mr Clippy. The application creates squashed 250x250 thumbnails of any of the above filetypes and can output them as the original file, JPEG, Sprite or thumbnail.

The most powerful aspect of the viewer is the ability to display print previews of selected clipart groups. Scrolling through the pages is the quickest way of viewing the thumbnails with their file name and information beside them. The only complaints I have about this method are that there is no instant drag and drop facility from the print preview window and that the downsizing of the thumbnails to the preview size creates an inaccurate rendition of graduated fills – but perhaps this is picking at nits.

The print preview pages can obviously be printed which also solves the problem of the manual *in absentia*. But 2,790 graphics equates to 140 pages and takes a lot of time and ink on a colour bubblejet. What also takes time is the one-off generation of the Mr Clippy files from the 2,790 originals although it's nothing that a quick viewing of the Star Wars trilogy wouldn't resolve.

It must be remembered that Mr Clippy is not a Smart DTP product. It is sold by iSV but can be purchased with PublishArt 3 at a 25 per cent price reduction. The CD-ROM itself costs £40 and £5 for the upgrade from version 2. The package also comes with the complete iSV 277 font pack and a bundle of other utilities including over 220 *Impression* frame borders, extra clipart and applications like *Colour Fun* and an electronic circuit designer. The value of these extras is estimated at £80.

So is the package good value? To consider this, the quality of the main clipart collection must be assessed. The graphics range from the very simple to quite complex, and some have been adapted from scanned-vectorised imagery. There is a great deal of mediocre artwork in the collection, and on either end of the scale, a number of very impressive and equally dreadful offerings.

The categories (backgrounds, borders, bullets, corners, designs, drop capitals, headers and footers, highlights, margins, patterns, quickpaper, rules, stencils, surrounds and symbols) are well defined and all contain a large variety. Really, the main and suggested use for this kind of clipart is for manual alteration and customisation but as works of art in themselves they fall short of the mark. With so many files to judge I can only usefully make an overall conclusion that the artwork is worth the money but only in light of the extras, fonts and Mr Clippy offer.

Unlike some of the more expensive but superior clipart CD-ROMs available on Mac, PC, CorelDraw and PhotoCD formats, this package seems very insignificant. As an Acorn product it is one of the better collections and as were its predecessors PublishArt 3 will be the ideal resource for the home and educational markets.

Contact details

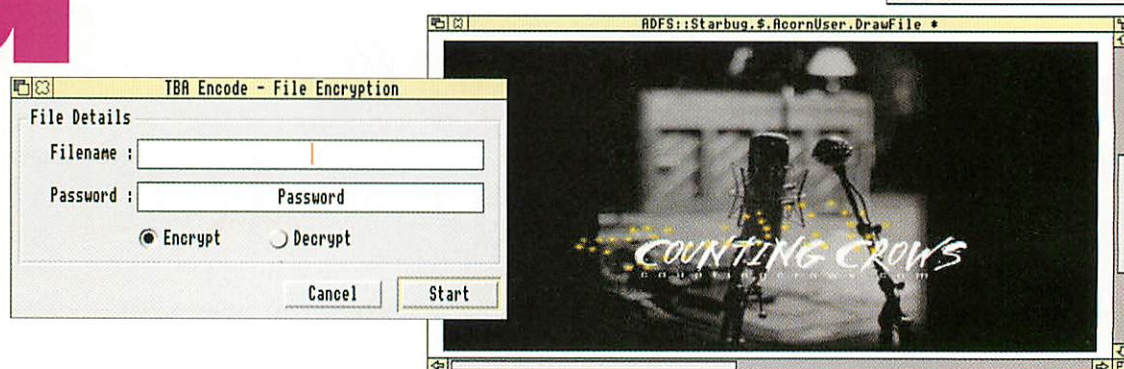
Company: SmartDTP
Address: 36 Park Road, Duffield, Belper, Derbyshire, DE56 4GR
Tel: (01332) 842803
Fax: (01332) 842803

Company: iSV Products
Address: 86 Turnberry, Home Farm, Bracknell, Berks, RG12 8ZH
Tel: (01344) 55769

TBAFS

Slimming down?

Jonathan Gutteridge looks at an alternative compression program from TBA



Ever wondered what you're going to do when all the space has gone from your hard disc? Buy a new one? Maybe delete some old files that aren't needed any more? Don't panic just yet. Although there are two commercial compression systems already available for RISC OS – *SparkFS* and *ArcFS* – *TBAFS* is being promoted for its ease of use for everyday users who want to make their hard disc last that bit longer.

Installation

Installation is a simple drag 'n drop job and after the program has been run for the first time, a copy protection routine kicks in to make it work on your machine *only*. This has its advantages and disadvantages. On the plus side this makes it a very secure system, it doesn't require the insertion of a key disc when run and it doesn't ask itself to be re-installed on updating the !System folder.

The downside is that if your machines aren't networked, you'll have a problem taking work elsewhere. Also the computer you're going to use must have a copy of !TBAFS as neither SparkFS or ArcFS support this filetype – as far as I'm aware there's no way of saving it as a normal archive. A decompressor is available free on the Web.

Compressing files

After loading, the icon will appear on the right hand side of the iconbar. Clicking select on the icon will make the configuration window appear. This includes options which will let you change settings such as the way in which files are to be compressed.

The three available are Squash, which compresses files to their maximum, TBA, which compresses files quickly and an option which will not compress the file at all. Other options let you change certain

factors affecting the speed at which the file(s) are compressed.

Clicking Menu on the icon will lead you to the option for creating a new Image. An *image* is the equivalent of an archive and although it looks like a directory, it allows you to have any number of files inside and also compresses any files which are placed inside it.

File compression test

To check the speed and amount of compression this program can handle I have compressed a 158K *Draw* file and used both ArcFS and SparkFS as well as TBAFS. The table below shows the results.

Test results

Program	Time (secs)	Size in (K)
TBAFS	2.40	53K
SparkFS	3.02	21K
ArcFS	2.40	22K

As you can see, both TBAFS and ArcFS were about the same when it came to speed, but SparkFS came out on top in being able to reduce the file to a mere 21K. As many of the settings as possible were made the same to produce a fair comparison.

Unlike the other two programs TBAFS requires very little memory when decoding, which makes it ideal for handling large archives on low memory machines.

Protecting and fixing

Also included on the disc are two other programs, *TBAencode* and *TBAFSfix*. The first is for protecting files so, for example, to protect a drawfile, simply drag the file to the main window and enter a password.

When you next try to load the drawfile an error will come up saying it's not a drawfile. This works reasonably well, although it could do with a few more features and options.

TBAFSfix is simply for fixing any TBAFS files which have gone wrong. I've been unable to test this feature properly as I haven't had any type of 'broken' disc but I dragged a file which was in working order to the icon just to see what happened. It resulted in about seven error messages appearing which contained what seemed like random numbers or letters.

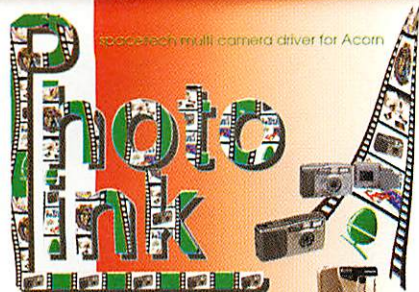
Conclusion

Overall this seems to be a program that's heading in the right direction but is still quite a way off. I was particularly disappointed when I compressed a copy of ARCBbs, tried to run my BBS from it and got a message saying that certain files could not be found.

One group of people in particular who require hard disc space saved are those who run BBSs. Also, compared to SparkFS and ArcFS, the number of functions seems quite feeble. Maybe TBA could work on this for future releases. Personally I'd either use SparkFS or ArcFS or wait for a future release of TBAFS that's more developed.

Product details

Product: TBAFS
 Price: £24.99
 Address: TBA Software, Mead Farm,
 North Road, Timsbury, Bath,
 BA3 1JH
 Telephone: (01761) 470003
 Fax: (01761) 479011
 E-mail: sales@tbalond.demon.co.uk



NEW! PhotoLink is an Acorn multi-driver for the most popular makes of Digital camera. Cameras currently supported are the **Olympus 400, 400L & 800L, the Sanyo Image PC** and the **Epson PhotoPC 500**. Other cameras are in the pipeline. PhotoLink has many features including some not available from the camera itself. The camera may be "hot-linked" directly to your favourite application. PhotoLink is available on its own or bundled with a camera. Superb hard copy can be obtained via our **FotoFun** printer or Canon **PhotoReal** drivers.

Prices (inc VAT):

PhotoLink £69.00

Camera + PhotoLink:

Sanyo ImagePC £434.75, Olympus C400 £299.00, C410L £587.49, C800L £949.99, Epson PhotoPC 500 £499.00.

PHOTODESK (v.2) is the package which defines studio quality image editing and artwork on RISC OS machines. It is easy to use but has many powerful features, including a sophisticated colour management system (CMS) for the full-time graphics professional. Most of the extensive programming effort invested in this project has been concentrated upon ensuring a predictable user interface with an integrated design and most importantly, all operations have been engineered to the **highest quality** possible.

£269.50 (£229.36 ex VAT)

PHOTODESK LIGHT, an economic alternative to PHOTODESK2 retains most of its creative features apart from the CMS and the possibility to add LAYERS. **£134.75 (£114.68 ex VAT).**

Plug-in Effects Packs are available for both packages. A pack containing 10 special effects, or 5 extra loader/savers is available at **£19.95**

all prices include UK VAT and UK P&P

**2Mb A3020 computer
with Acorn 14" monitor
+£200 worth of 1st class
Acorn software for only
£399** (£468.83
inc VAT)

SOFTWARE:

StartWrite (Wordprocessor),
Application Suite, Mouse Mat,
PLUS choice of Options 1 or 2 below
(£39 extra for both together):

OPTION 1 - EARLY TIMES BUNDLE.

Artisan 2. Art package from Clares.
Doris the Dotty Dog. Naughty story from
Sherston.

Daryl the Dragon. Adventure story from 4Mation.
Amazing Maths. Mental arithmetic from
Cambridgeshire Software House.

Gemini. Matching pair game from Cambridgeshire
Software House.

Maths Gen. Maths worksheet creator from Creative
Curriculum Software.

OPTION 2 - HOME BUNDLE.

Resultz. Spreadsheet from Colton Software.

Desktop Database. Database from Iota.

Revelation. Art package from Longman Logotron.

Zool. Fantasy arcade game from Gremlin.

A SPECIAL SUMMER OFFER FROM



CASTLE TECHNOLOGY



Available now while stocks last!

Call 01728 621222



Colour Monitor included

HARDWARE UPGRADE OPTIONS:

- 4Mb RAM - £50 (£58.75 inc VAT)
- Hard Drive - £50 (£58.75 inc VAT) for 80Mb (170Mb & 400Mb also available)
- SCSI Interface for CD-ROM drive, Scanners etc
- MIDI Interface
- Econet / Ethernet interface
- 386 PC card

PHONE FOR FULL DETAILS

THE SPECIAL OFFER A3020 COMPUTER

This A3020 system comes complete with 2Mb of RAM, mouse, AKF53 colour monitor and choice of software bundles. Features include ARM 250 processor, serial port, printer port, network expansion slot, and one internal expansion socket for a wide range of hardware upgrades.

COLOUR PRINTER JUST £69!

Buy an A3020 and get this superb Acorn JP 360 printer for just **£69** (£81.08 inc VAT). Price includes printer cable and colour kit.

Also available separately (call for details)



ORDER NOW! Order by telephone on 01728 621222 or Fax on 01728 621179.

Delivery £10 per computer (£11.75 inc VAT)

Cheques*, debit cards (Switch & Delta), credit cards (2% charge may apply), and educational orders accepted. All trademarks acknowledged.

*Cheques: allow 5 working days to clear. E&OE

The show goes on

Saturday morning on the 17th May was dull and overcast but only outside; by midday over 1,000 people had arrived at the Thorne Park Sports Hall in Wakefield for the premiere Northern show. The afternoon quietened down — probably due to the Cup Final — but as this was being displayed on many stands it wasn't a good reason for staying away. Sunday provided a steadier flow of visitors and there were almost 3,000 people through the door. Here's a round-up of what they saw and heard.

Theatre presentations

The theatre programme was varied and on the whole well attended with the inevitable standing-room only situation at Peter Bondar and Chris Cox's talks. The adjacent bar area contained a couple of TVs for the overspill to watch the talks being given.

Chris Cox

Chris talked to a full house about new products. The main subjects were the A7000+ (see full review in this issue) and Risc PCs which will now ship with StrongARM and 1.2Gb HD as standard. He told us about clients who were paying Acorn to develop technology including a browser, RisCafe and eXtend. He also announced the re-launch of AcornSoft to brand Acorn software for promotion purposes.

The development of a better marketing strategy was explained. The NetStation will be used as a key tool and, as Chris pointed out, underneath all the hype it's RISC OS. This campaign is already beginning with a roadshow in shopping centres in south-east England. Acorn NetStations will be set up for people to get a hands-on feel for the Internet using an Acorn-branded machine.

Inevitably questions were asked about developments of floating point processing with the StrongARM which Chris explained would be ideally in-built on the chip, but this would be up to Digital. He also said that the core system for the Risc PC 2 was being worked on.

Peter Bondar

Peter Bondar's talks are guaranteed a good turn out and this was no exception. He told the crowd about the internal re-

organisation at Acorn (see News section) and that recruitment is on-going for more engineers. They plan to employ 15 graduates this summer and there was also mention of a student development plan.

He talked of the contracts with Korea and Japan and of a new one with a company in Taiwan — there is also an office planned in California. He went on to say that we can expect to see the new logo concept Acorn@heart over the next few months.

Galileo — the new operating system was brought up, he said that this would have a *hardware neutral approach*. He further developed the idea of AcornSoft saying that this may well be used as a marketing vehicle for other software houses as well.

Peter explained that the release of the new portable is dependent on the original client. On being questioned about software development, he admitted that he was personally responsible for the software tools being [expletive deleted] but that was in another time when budgets were limited and hard choices had to be made. Perhaps things will be different now.

Answering questions he commented that the Risc PC2 will have a new case which he expects will provoke an interesting reaction and as for floating point, all he would say was that Acorn had a *cunning plan* — we can only hope that they kill Baldrick first.

Acorn on show

Acorn's stand was busy right through but this comes as no surprise as there was rather a lot to see. The new A7000+ was unveiled with its speed enhancements, floating point facility, EDO RAM support and built-in on-line help. The StrongARM Risc PC was on display too.

The prototype of the new Acorn portable was covered by a Do Not Touch sign for most of the show. *Acorn User* received an exclusive preview and we can reveal that the keyboard included a revolutionary replacement for the mouse — nicknamed the *pencil eraser* by Acorn staff — a tiny gadget located in the centre of the keyboard which gives finger-tip control of the mouse pointer. The full colour screen was excellent quality.

The NC was demonstrated running Acorn software — a turnaround Acorn pol-

icy but a step in the right direction for all Acorn software developers. Also being shown was the eXtend client/server technology.

Staff were also on hand to demonstrate the modification to the window system — allowing users to fix the window as a pane in another window — which will be particularly useful for running Java applets in browser windows.

Two-day tour

It could easily take the full two days to tour round the exhibition — the low cost of stand space at this show guaranteed just about everyone was represented. The Argo stand certainly could not be ignored — sales of Zip drives and modems were good and it was amusing to see Andrew Foyle of Argo Interactive wandering round with a mallet busy repairing parts of his stand while muttering *It's your kneecaps or a zip drive*.

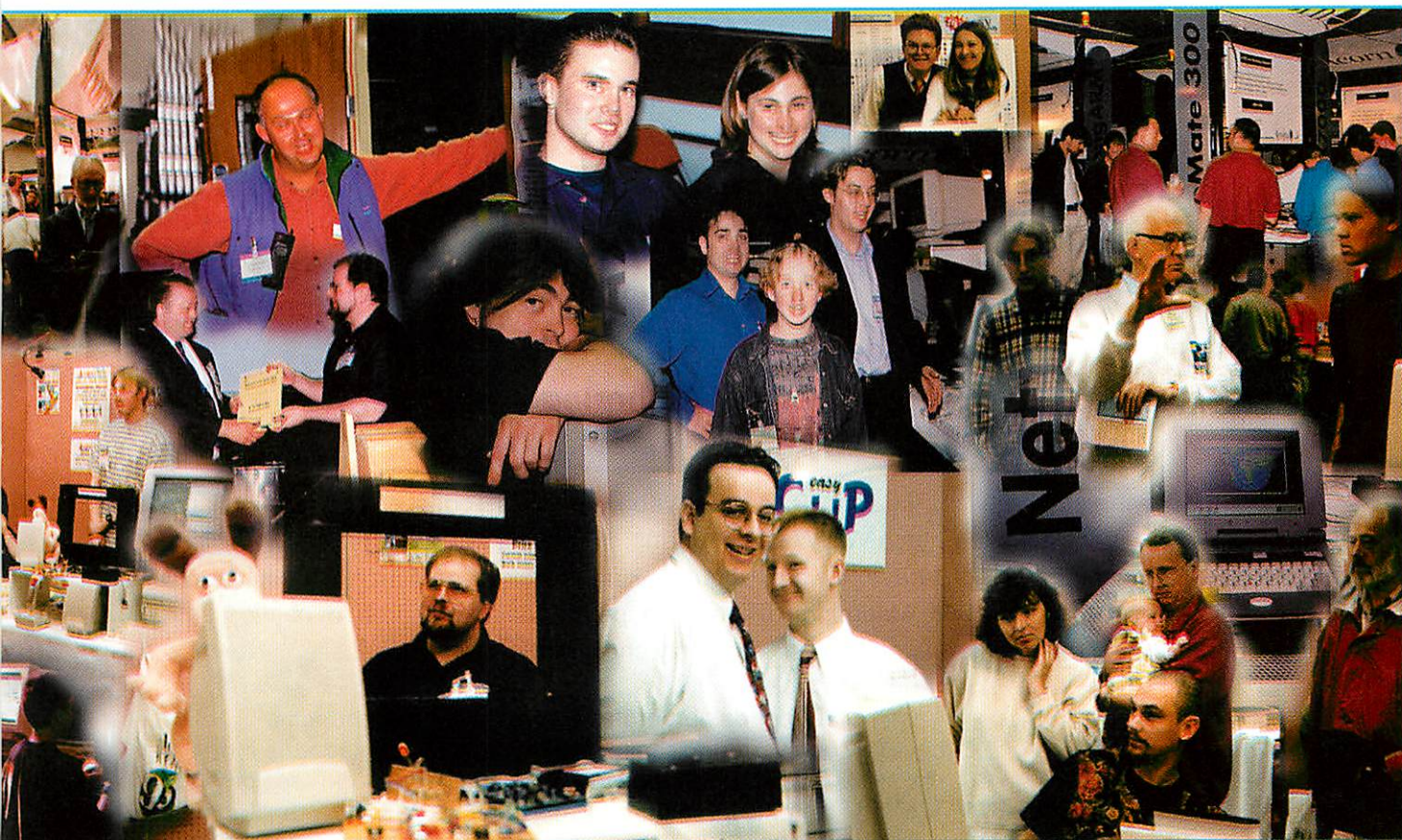
If digital cameras were what you were after, Spacetechn, Irlam and Acorn were on hand to demonstrate. It took until Sunday afternoon for me to get to the front of Spacetechn's stand which was surrounded for the full two days by visitors interested in the cameras, the new version of *Top-Model* (reviewed next month) and *Photodesk 2*.

Drifter from The Fourth Dimension could be played at various places around the show and was going down well. The darkened TBA arcade was the place to see the first public showing of *Break Horse Power (BHP)*, but after much hype it looked a little disappointing. Werewolf debuted *Shuggy* at the show — see Gameshow for more details — and Destiny Software were showing the latest developments to their game *Eternal Destiny*.

Stuart Tyrrell told us that his company STD are currently developing RISC OS interfaces for Playstation and Nintendo 64 gamepads.

Acorn World '97 show representatives were on hand to explain the new travel packages they were offering to make a cheaper day of it when visiting the exhibition in November, if travelling from





outside the South-East.

Arthur from CSH and Clares' new *WimpBasic* as well as all their other stock were selling well. SmartDTP had almost sold out of *PublishArt 3* - no wonder James Parry always has that grin on his face. And iSV's *Mr Clippy* was in evidence on many a T-shirt.

If Web site creation and maintenance is your thing, Dalriada had their first public demonstration of *WebSpider* and IMS were showing *WebMaster* - look out for the comparative review in the September issue of *Acorn User*. On the RComp stand was the latest version of *HTMLEdit3*.

Gareth Owen, in his new job at Logotron, was busy promoting their software including *Music Studio 32*.

Jon Duddington's *ISpeak* could be heard reading text - although I didn't hear a Yorkshire accent - maybe that's on the cards ready for next year's show.

Apart from the Wakefield Group, The ARM Club and the Derbyshire Acorn Risc Group represented the user groups encouraging any Acorn enthusiasts to join their ranks and meet up throughout the year.

Warm Silence Software launched *FPEPC*, a software package to utilise the floating point coprocessor present on DX PC cards from the RISC OS side.

Fabis had *Recycler* on sale for the first time - expect a review soon. RaspSoft were demonstrating the new payroll package *HardCash*, and Sherston were showing off all their latest releases. SoftEase were doing well with the latest version of *TextEase*, despite the team having a few too many on Friday night.

Prize draw

Saturday:

First prize - Casio QV10a with Acorn software - Richard Hartley, Burnley, Lancs

Second prize - 6 month subscription to Argonet - D E Kilgariff, Lincoln

Third prize - ArtWorks - Mr D Hill, Ilkeston, Derbyshire

Sunday:

First - Casio QV10a with Acorn software - J Evans, Wakefield

Second - 6 month subscription to ArgoNet - G Grey, Hightown

Third - Ovation Pro - Alan Mays, Sheffield

Others:

Personal Accounts - John Tytgat, Belgium, Mark McLean, Merseyside, Mrs Therwick, Bucks

WimpBasic - Peter Dickinson, Wakefield

Textures (RComp) - Ken Patterson, Leeds

Web site competition

Best Commercial Web site was won by the Acorn Cybervillage, <http://www.cybervillage.co.uk/>

Best Enthusiast Web site was won by the Acorn Computer User WWW Group - Poppyfields, <http://www.poppyfields.oaktree.co.uk/>

Here's to next year

Many companies are finding exhibitions such as BETT simply too expensive to attend. Shows like Wakefield are less expensive and they have a good chance of financially breaking even - these seem to be the way forward, so support any shows in your area - the South-East show in Welwyn Garden City is on July 5.

The Charity stand which was jointly sponsored by the WACG and Norwich Computer Services raised almost £1,800. Proceeds will be split between charities in Yorkshire and Norwich. Sales of StrongARM labels made £130. Thank you to those who supported this worthwhile cause.

Chris Hughes from WACG commented that, 'the success of the show is down to the hard work and dedication of the committee and members of the Wakefield Computer Group and of course to the wholehearted support of the Acorn community. We have already had five exhibitors asking to book for next year. Our new venue has proved a success for everyone allowing a greater number of both small and larger Acorn companies to be represented at the show.'

I think everyone who exhibited or visited the exhibition will agree that the show was a great success and hopes that WACG will arrange another next year. And of course I can't finish without mentioning Brian Eves - the Town Crier - who spent the two days making announcements around the show at the top of his voice - what do you do the rest of the year?

AU

RComp

Available NOW!

"Way ahead of the field"

HTMLEdit v3

Next Generation

WWW Authoring

For RiscOS

Why bother playing catch-up? HTMLEdit v3 and the Web Designer's Toolkit offer Acorn owners everything needed to make top notch WWW sites. Forms, frames, tables, pictures? No problem! And with HTMLEdit v3, you don't have to worry about making mistakes, as it includes a full error checker to do the hard work! With Macroing; URL and Image databasing; shared, dynamic files, and fully supporting the HTML 3.2 standard, it's the only choice for a professional site. **Now!**

Textures
Professional Edition

Every design professional knows that the right background really shows off your message, be it on paper, or on the WWW. Make your mark - design your effects in Textures Pro - the complete texture studio

R-Comp, 22 Robert Moffat, High Legh, Knutsford, Cheshire WA16 6PS

Tel: 01925 755043 Fax: 01925 757377

Email: rcomp@rcomp.co.uk rci@rcomp.co.uk



WebSpider



WebSpider is an easy-to-use editor for creating pages for the World Wide Web, which works just like a traditional DTP or wordprocessing package.

The complexities of maintaining links between your website files, converting graphics etc are performed automatically, and there is no need to learn web jargon, freeing you to focus on the design of a really attractive and effective website.

Due to Dalriada's long experience in DTP, WebSpider comes to you at an extremely competitive price, and with all the interactive design expertise only an established DTP software house can bring.

- Links are automatically update as files are renamed, moved, etc
- Graphics converted automatically to Internet formats
- Complete with website management, sub-directories etc
- Easy-to-use drag-and-drop linking and point-and-click editing
- Tabling, imagedrop etc tools included
- Comprehensive professionally printed manual with design hints

WebSpider is only £40 until 31st August 1997, then just £60.

TableMate *Designer*

TableMate Designer is the latest generation of Dalriada's flagship DTP utility - offering extensive features to create stunning tables instantly!

- Variable fonts inside cells
- Super- & sub-scripts, bold, italic effects
- Export/Import HTML tables
- Global cut-and-paste
- Named styles and colours

Only £60 (£45 for Impression Style & Publisher users).

Also available:

DiagramIt
Diagrams of all sorts - in a flash!

GraphMate
Presentation graphics without tears.



Nstore 5

The popular National Curriculum planning, record keeping and reporting package has just been completely upgraded. *Nstore* is now multitasking and mode independent, using 'drag and drop' file transfer and RISC OS printer drivers.

Other enhancements over version 4 include automatic printing of targets in reports and the facility to import CSV files of pupil names, gender, dates of birth and

attendance. The basic version of *Nstore 5* provides all of the original features including automatic report writing.

It's on two discs and costs £44.95. It stores data for six classes of 36 pupils and 144 'topics'. Extra discs, which can each store three classes are also available. The hard disc version, which stores up to 36 classes and over 1,200 topics costs £69.95, including a site licence. Existing users can

buy a complete upgrade including manual, for £14.95 (basic version) or £29.95 (hard disc version). Full information about *Nstore*, and a free demonstration copy are available now from their Web site.

H.S. Software

Freepost, Swansea, SA2 9ZZ

Tel: (01792) 204519

Fax: (01792) 298283

Web: <http://www.argonet.co.uk/h.s.soft>

Yet more from Sherston

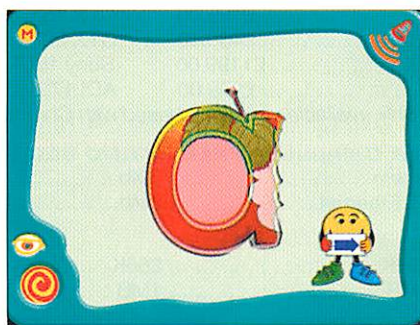
Sherston are currently producing so much software I could almost write a Sherston Page each month!

Their first new program is an update of their popular *Talking Animated Alphabet* which appears on CD-ROM and now features sound, music and morphing animations. Aimed at Key Stage 1, the program helps children to learn lower case letters and their phonic sounds in three graded activities.

In the *abc-CD* each letter of the alphabet has a corresponding illustration that starts with the same letter and has been carefully designed to look like the shape of the letter. (The monkey, for example, is holding his arms in the shape of a letter 'm'). Children can watch the letters 'morph' into their corresponding images while listening to the letter's sound. This provides them with a strong visual and aural link that helps them remember the shapes and sounds of the alphabet.

The *Talking Animated Alphabet* on CD-ROM costs £29.95 + VAT.

Nursery Rhyme Time is a triple format (Acorn, PC, Mac) CD-ROM containing a delightful selection of nursery rhymes to



either watch and listen to, or join in. The nursery rhymes are carefully read out, each word highlighted as it's read, with background music and a clever animation to watch.

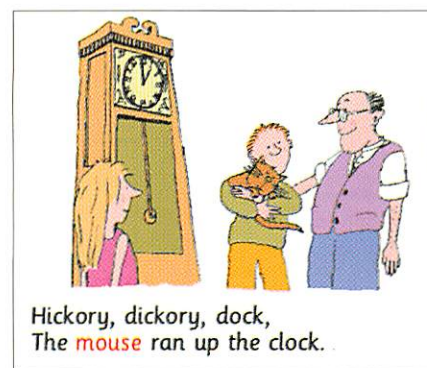
Nursery Rhyme Time on CD-ROM costs £40 + VAT.

Finally, Sherston have put all 18 *Stage 3 Talking Stories* for the Oxford Reading Tree onto a CD-ROM. The triple format disc cost £65 + VAT and includes six stories from *Stage 3*, *Stage 3A* and *Stage 3 Wrens*.

Sherston Software

Tel: (01666) 840433

Fax: (01666) 840048



Hickory, dickory, dock,
The mouse ran up the clock.

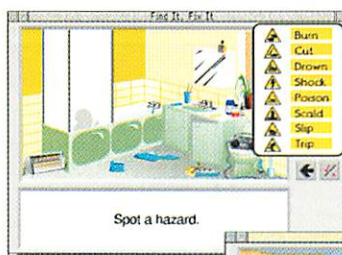
Safety in the home

4Mation are another company who feature regularly in these pages because they continue to produce high-quality material which is frequently tackled in a completely new and refreshing way.

Designed and written by 4Mation and sponsored by Domestos and RoSPA, *Find it, Fix it* is an interactive program designed to make youngsters (and adults) aware of some of the hazards around the home.

The program opens by offering a choice of either kitchen or bathroom and then the user may either search for hazards or fix them (hence the title). Each time the user clicks on a suspect object, a menu pops up asking what injury the hazard is likely to cause. The program responds to the input by either proclaiming the answer to be correct or offering help if the answer is wrong.

As with all of 4Mation's software, the artwork by Don



Slaven is superb. Some of the hazards are not easy to spot in either of the two rooms, but if you click on something suspicious, that area is magnified so that the object can be clearly seen.

Some worksheets are supplied with the pack plus a chart detailing some domestic accident statistics. I was astonished to learn that each year 70 people drown in their baths and there are almost 300,000 cuts in the home requiring hospital treatment. Although *Find it, Fix it* is aimed at children, I think adults might be advised to take a long hard look at this program.

Find it, Fix it costs £24.50 + VAT (single user) and £49 + VAT (site licence), plus £2 P&P.

4Mation

Tel: (01271) 25353

Fax: (01271) 22974



Micro Laser Designs

**105 Midford Road
Combe Down
BATH BA2 5RX**

**Tel : (01225) 833266
Fax : (01225) 833266**

Micro Laser Designs is an Acorn Centre of Technology and supplies the complete range of Acorn Hardware and Software. We also offer scanning, printing and imagesetting services and specialise in litho printing from Acorn files - Letterheads, School Magazines, Brochures, etc

**ALL PRICES SHOWN
IN THIS ADVERT
INCLUDE VAT.**

Carriage Charges:

For orders of £250 or more, carriage is FREE. Small orders will have a delivery charge of £2.50, or £5 for heavier items.

E&OE.



IMAGESSETTING

Check our FILM prices!
(P & M may apply). Prices are per page.

Don't forget prices INCLUDE VAT.

Pages	A4/A4 +	A3/A3 +
1	11.75	14.10
2-9	6.45	11.10
10-24	5.85	9.40
25-49	5.00	8.20
50 +	4.10	7.00

Bromide prices on request.

Further discounts available - please call.
Email: bureau@microlas.demon.co.uk

NEW SERVICE!

FULL COLOUR Laser Printing to A4 and A3

We now offer a fast turn-round colour laser printing service, ideal for proofs, certificates, short run colour brochures etc or just a high quality print of your favourite piece of artwork! Please call for more details, or visit our web site!

MICRO LASER DESIGNS

All prices listed were correct at the time of going to press. We reserve the right to change them if the need arises - you will be notified of any changes upon ordering. Please allow time for clearance of cheques. Credit / debit cards will be charged on day of despatch.

20/20 Finance

We operate the Acorn 20/20 Finance Interest Free Credit Scheme - Please call for details.

STRONGARM RISC PC's

TRADE IN DISCOUNTS AVAILABLE

	Memory	Hard Disc	Price
Risc PC StrongARM 4M	4Mb	1.2Gb	£1105.00
Risc PC StrongARM 4M, 8 x CD	4Mb	1.2Gb	£1155.00
Risc PC StrongARM 10M	10Mb	1.2Gb	£1390.00
Risc PC StrongARM 10M, 8 x CD	10Mb	1.2Gb	£1440.00

ALL PRICES LISTED ABOVE EXCLUDE MONITORS, PLEASE SEE LIST BELOW

When purchasing a RISC PC during June, July & August, choose ONE of the following FREE:

1. Family Software Pack - BK Human Body, Multimedia Textbase, ArtWorks.
2. Business Software Pack - EasiWriter Pro, Eureka 3, Datapower
3. 17" AKF93 Monitor for the price of a 14" AKF60.
4. Canon BJC4100 Colour Printer
5. Casio QV10A Digital Camera

WE BUILD COMPUTERS TO YOUR EXACT SPECIFICATION - PLEASE CALL

Acorn 14" AKF60	£255.00	Acorn 17" AKF91	£610.00
Iiyama 8617E	£585.00	Iiyama Pro 9017E	£650.00
CTX 14"	£199.00	CTX 15"	£265.00
CTX 17"	£430.00	CTX 20"	£920.00
CTX 21"	£1199.00	Sony 15" Trinitron	£350.00
ADI 15"	£299.00	ADI 17"	£495.00

Prices marked * only available when purchased with Computer.

Acorn Network Computer (CALL IN AND SEE ONE FOR YOURSELF!)

NC with 28.8 modem	8Mb	£450.00
NC with 10BaseT Ethernet	8Mb	£450.00

Pocket Book

Pocket Book II 256K	256K	£230.00
Pocket Book II 1MB	1MB	£305.00

PC CARDS FOR RISC PC

ordered alone with RISC PC

DX2-66	£285	£165
DX4-100	£345	£220
5x86-100	£470	£350

CD ROM DRIVES

4 X 4 Auto Changer	£125
16 spd IDE	£125
12 spd SCSI	£170
Parallel Port 8 spd	£220

CD ROM WRITERS / PD Drives (Needs SCSI)

Internal CD ROM Writer	£655
External CD ROM Writer	£699
10 x DISCS for above	£68
Panasonic PD Drive	£399
650Mb PD Cartridge	£36

INK JET CARTRIDGES / TONER CARTRIDGES / CONSUMABLES

Acorn JP150	£16.27	Canon LBP8	£65.15	REFILLS / COMPATIBLE	
Canon BJ10etc	£18.75	Canon LBP4	£67.55	Canon BC01	£30.66
Canon BJ200/230	£16.44	BJC600 Black	£7.64	BJC600 Black	£4.10
Canon BJ130E	£11.52	BJC600 Col	£5.35	BJC600 Col	£4.92
HP 51626A	£19.92	BJC800 Black	£13.16	BJC800 Black	£8.21
HP 51649A	£23.50	BJC800 Col	£15.62	BJC800 Col	£9.85
HP 51625A	£23.50	Can BC20	£21.39	Canon LBP8	£32.86
Epson SO20047	£16.39	Can BC21	£32.90	Canon LBP4	£32.07
Epson SO20025	£8.22	Can BC1-21BK	£5.28	NEW LOWER PRICES!	

Listed are just a few of the consumables we supply, please call for our full colour 28 page Computer Supplies Catalogue which contains hundreds of products! - Mouse Mats, Ribbons, Ink Jet/Toner, Discs, Cleaning Products, Labels, Disc Boxes, CD towers, Furniture, Workstations, Screen Filters, Notebook Carry Cases, and much more!

CABLES, CONNECTORS, SPARES

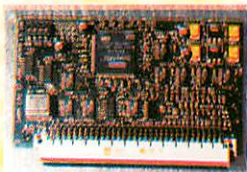
Parallel Printer Cable	£5
Parallel 36 way to Parallel 36 way	£5
25 way D to 25 way D	£5
SCSI 50 way IDC to 50 way IDC	£12
SCSI 25 way D to 50 way Centronics	£12
SCSI 50 way Cent. to 50 way Cent.	£12
SCSI II Hi Density to 50 Way Cent.	£20
9 way D type to SCART	£12
5 1/4" Drive Power Splitter	£4
5 1/4" - 3 1/2" Power Adaptor	£4
Two way Printer Sharer (Cent. 36 way)	£13
Two way Printer Sharer (D type 25 way)	£13
BBC Printer Cable	£7
D type Male 9 way	95p
D type Male 15 way	95p
D type Female 9 way	95p
D type Female 15 way	95p
Covers for above	80p
IDC Connector 34 Way	£2
Centronics Plug 36 way	£2
Centronics Plug 50 way	£3
50 way IDC Cable, per metre	£2
9 way to 15 way Monitor Adaptor	£7
Original Acorn mouse	£27.50
Microsoft serial mouse	£22.50
Standard PC serial mouse	£15.00
RISC PC Case Slice kit (PSU)	£110
RISC PC Case Slice kit (no PSU)	£85

MEMORY etc

A305 / A310 4Mb	£110
A305 / A310 4 - 8Mb	£185
RISC OS 3 Carrier Board	£22
MEMC1A Upgrade	£49
A400/1 1Mb Pack	£38
A400/1 4 - 8Mb	£185
A3000 1 - 2Mb (expandable to 4Mb)	£46
A3000 1 - 4Mb	£83
A3000 4 - 8Mb	£185
A3010 1 - 2Mb	£42
A3010 2 - 4Mb	£73
A3010 1 - 4Mb	£87
A3020 / A4000 2 - 4Mb	£76
A5000 2 - 4Mb	£80
A5000 4 - 8Mb	£185
RISC PC 1Mb VRAM	£70
RISC PC 2Mb VRAM	£110
RISC PC / A7000	
4Mb SIMM	£20
8Mb SIMM	£35
16Mb SIMM	£75
32Mb SIMM	£135
64Mb SIMM	£390

Memory prices are currently fluctuating daily - please call for our latest price
We supply a full range of hardware and software please telephone for more details and a quote.

THE RIGHT CHOICE



**STRONGARM
PROCESSOR
UPGRADE
FOR RISC PC
£275.00**



PRINTERS / MODEMS etc

Canon BJC70	£199
Canon BJC240	£199
Canon BJC620	£365
Canon BJC4200 (limited offer)	£209
HP DeskJet 400C	£156
HP DeskJet 690C	£254
HP DeskJet 820C	£305
HP DeskJet 870CXI	£413
HP LaserJet 5L	£392
HP LaserJet 5P	£585
HP OfficeJet LX	£559
33.6K Sportster Flash (56K U/G)	£199
33.6K Sportster VI	£179
ANT Internet Suite	£115

BITS 'N' PIECES

25 Watt Powered Speakers	£29.00
50 Watt Powered Speakers	£39.00
PowerTec SCSI II Card	£200.00
Cumana SCSI II Card	£175.00
1Gb IDE Hard Disc	£150.00
1Gb SCSI Hard Disc	£210.00
2Gb IDE Hard Disc	£215.00
2Gb SCSI Hard Disc	£295.00
3Gb IDE Hard Disc	£285.00
4Gb SCSI Hard Disc	£665.00
5Gb IDE Hard Disc	£395.00
EPSON GT9500 Scanner	
with ImageMaster / TWAIN	£655.00
IRLAM COLOUR MOBILE SCANNER	
	£199.00
EESOX GRAPHICS TABLETS	
ARP8	£210
A5	£300
A5	£445
A4	£560
A2	£1820
Impression Style	£89
Impression Publisher	£139
Impression Publisher Plus	£250
ArtWorks	£105
TurboDrivers	£49

Telephone : (01225) 833266

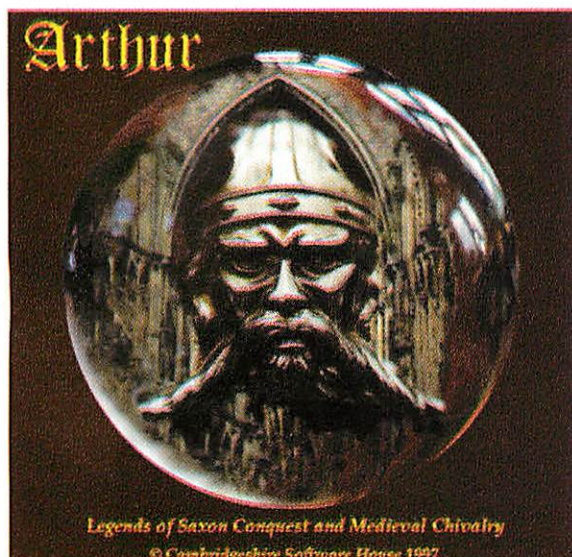
Facsimile : (01225) 833266

email : sales@microlas.demon.co.uk

www : http://www.microlas.demon.co.uk

The return of Arthur

No, not a return to a pre-RISC OS operating system, but a CD-ROM about King Arthur and the legends, characters and locations surrounding him. **Geoff Preston** investigates



Another classic from CSH – Arthur: Legends of Saxon Conquest and Medieval Chivalry

Entitled *Arthur: Legends of Saxon Conquest and Medieval Chivalry*, this is the latest (large) program from CSH and follows the same format as their previous award winning CD-ROM, *The World of Robert Burns*.

Arthur differs from all other multimedia CD-ROMs (apart from *Robert Burns*) in that it will not work until instructions in the form of a text file have been entered into it. Once the program icon has installed itself on the icon bar, a 'Quest' must be dragged onto it. The Quest is in fact an encrypted text file which determines the opening screen, the locations you visit and the clues required to solve a problem or problems. Each Quest presents the user with a series of new challenges and takes him/her on a journey through

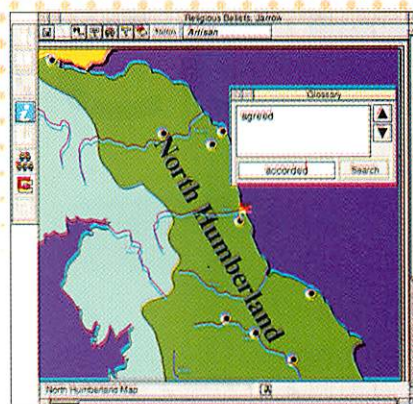
Arthur's kingdom meeting all manner of colourful characters in medieval settings.

Each Quest contains a number of multiple choice questions which require you to search out the answers. Once you've been through some of the 17 supplied Quests, you can easily produce more yourself using a text editor such as *Edit* and the 'blank Quest' provided.

The artwork is a combination of vector graphics, movie clips and photographs taken either from the air or at ground level. Every map, picture and story may be saved for use in a word processed document. There's a short biography for each of the main characters and a glossary of terms to help with some of the language.

The subject matter is unusual to say the least and although King Arthur doesn't feature very prominently in the National Curriculum Orders, the material contained in this program will prove to be valuable in the study of medieval history. One useful feature is the timeline which helps put events in the correct order.

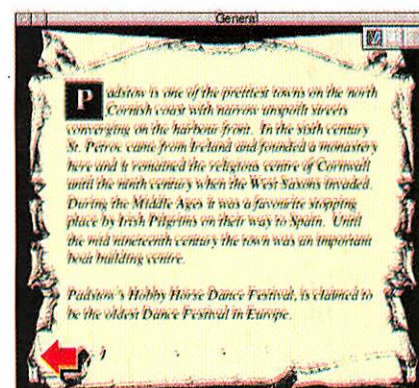
This is another classic



Scattered around the map are a number of hot spots which you must visit to solve the questions – the glossary of terms is very useful at times

from CSH. When I reviewed *Robert Burns*, I said that it would inevitably win some awards (which it did.)

Arthur: Legends of Saxon Conquest and Medieval Chivalry is even better than *Robert Burns* and I'm quite sure will be

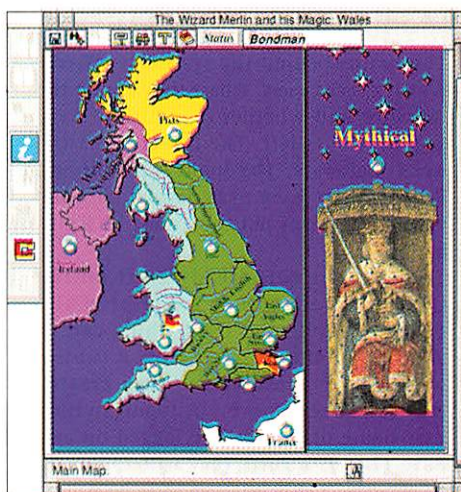


At any point users can click on the information icon on the main screen to get additional information about the currently selected area. The information is divided into categories (General, Legends, People etc) which needs to be read carefully in order to solve the questions. The text can be saved out of the program, as can the pictures, maps and movies

receiving more than one accolade. I also said that I expected other software houses to develop software that uses a file to launch it and which would provide exercises for students to work through. To my knowledge, nobody has, which is a pity because this is a very clever way of providing differentiated material for students to investigate a topic.

Product details

Product: Arthur: Legends of Saxon Conquest and Medieval Chivalry
 Price: £49.95 + VAT
 Supplier: Cambridgeshire Software House
 Address: PO Box 163, Huntingdon, Cambridgeshire, PE17 3UR
 Tel: (01487) 741223
 Fax: (01487) 741213
 E-mail: cshsoft@compuserve.com
 WWW: <http://ourworld.compuserve.com/homepages/cshsoft>



The full map is carefully drawn and contains lots of detail

Less waste

Allan Keeley shows how a program can be developed from a need



At the end of every week I end up with a mountain of waste paper which pupils have printed on a whim, maybe because they've nothing else to do at the time or, perhaps to see their work in its present state. Annoyingly, much of the work is never collected and, worst of all, when the pupils are asked why they have printed they don't know. The cost in paper, ink and toner was becoming excessive.

Paper saving solution

After consultation with Darrell Taylor at Room 20 Software we developed a plan. I had already tried a paper saving solution that was featured in *Acorn User* but found that this was not suitable for my network as it was written specifically for another, which was set up in a particular way.

I was looking for something that would provide feedback to the users telling them what was happening and giving them some indication of what they could and could not do. This element of interactivity was crucial, but equally important was keeping the job of the network manager to a minimum. A method had to be devised which would by-pass the need for a duplicate user list having to be entered onto whatever program was written.

Making the connection

As we use *NetGain* on our network we have to use a modified *!Scrap* called *!NetScrap*. This means that all users who want to printout have to be logged onto the network. On recognising this (I teach IT so I'm not always very quick on the uptake) we realised that we'd got them! Even if a network does not have the same restrictions as mine – i.e. users have to be logged on to print out – *Quota* from Room 20 Software will still work because it forces users to log on to print. All that was required was a means of tying the ability to print out with the fact that they were logged on together.

Quota fulfils all of my needs. It consists of three applications: Quota itself which

QServer	
ORME.HOLLISB Find	
Username	ORME.HOLLISB
Last printed	Thu,27 Jun 1996,09:43:15
Daily quota	2 /△ Unlimited
Remaining	7 /△ Locked out
Total to date	16
Close Load default Delete Update	

resides on the printer server and does the donkey work of marshalling the printouts into the correct place, *Client*, which is placed inside *Printers* and provides the users with an ecologically friendly tree icon next to the printer icon. A number underneath the tree tells users how many printouts they have left for that day and when they have used them all, the leaves fall off. If they try to print again an error message reminds them that they cannot and should try again tomorrow.

Monitoring printouts

The brains behind the system is *QServer* which checks users, where they are on the network and whether or not they have any printouts left. The clever bit is the users' database. The logic is as follows. Because users have to be logged onto the network to print out they must be legitimate users.

If they do not already exist on the *QServer* database they are created and given a default user level which can be adjusted by the manager from a control window. Once users have been created they can be searched for by typing in their user name or, if they are logged on and have *Printers* loaded, they will appear on the *QServer* menu and can then be edited, for example, given extra printouts.

The effectiveness of the system is further

enhanced by its management interface. These include unlimited printouts, this is useful for staff as well as trusted pupils who use the system and require access to more than the default amount of printouts. Users can be locked out, this is a good deterrent for persistent offenders, once they have been identified, as it forces them to get confirmation from a member of staff before they can print out. This is useful if you have, as I do, a user called *Clipart* which allows pupils to a directory structure full of 'clipart'.

Many younger pupils would print out enormous pictures of Mickey Mouse for no other reason than it looked nice on the screen. If a pupil does legitimately require extra printouts these can be given to that pupil instantly via *QServer* and the amended quota will appear underneath their tree.

Change the default quota

A running total of the users amount of printouts is displayed so extravagant users can be identified. Also because the users database is self-generating it is not a problem if you've set the default quota of printouts too high or low as the manager can delete the database, set new defaults and leave it to get on with it. The users on the network will only know if they happen to glance at their tree and see the number underneath change.

After two terms, the amount of waste paper generated has fallen dramatically. We still get the odd wastage but this is within the bounds of acceptability.

Product details

Product:	Quota
Price:	£49.99
Supplier:	Room 20 Software
Address:	49, Henry Street, Grassmoor, Chesterfield, Derbys S42 5AT
E-mail:	sales@rmtwenty.demon.co.uk

Archimedes Public Domain Library



Public Domain, Shareware and low cost software for Acorn computers



APDL PD CD-1 and PD CD-2 £14.50 each

A huge collection of P.D. and Shareware at a realistic price. PD-1 contains serious and educational, PD-2 games and novelties.

Issue 2, both PD CDs for just £27.50

Upgrades from Issue 1 £6 each or £11 for both

APDL Clip Art CDs

DTP-1 and DTP-2 - £17.50 each, DTP-3 - £19.50

DTP1 + DTP 2 £33, all three for just £50

All in Acorn format, Sprite, Drawfile and Artworks. Ideal for schools. DTP-1 and DTP-2 have around 500 Mb, DTP-3 more than 720 Mb

Hard discs

A310/A400 IDE

including interface

210 Mb - £129

330 Mb - £139

420 Mb - £149

850 Mb - £192

1.6 Gb - £232

A3010/A3000 IDE

including interface

120 Mb - £134

170 Mb - £154

250 Mb - £172

340 Mb - £187

420 Mb - £199

512 Mb - £219

Drives only

2.5 Gb IDE - £208

3.2 Gb IDE - £239

1 Gb SCSI - £198

2 Gb SCSI - £287

3.2 Gb SCSI - £345

Others available

Syquest 105, 230 & 270Mb removable, SCSI or IDE, internal or external Solve your backup and security problems - from £99, discs from £17

PLUS RISC PC RAM upgrades, the famous APDL part-exchange scheme if you need a bigger hard disc (eg. 420Mb to 1.6Mb for only £145) and more!

For a catalogue please send 50p or two 1st class stamps to APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN

Phone: 0181 778 2659 Fax: 0181 488 0487 www.apdl.co.uk

All prices include VAT and carriage



excellent value CD ROMS

THE Clip Art COLLECTION CD

The ClipArt Collection CD is the most comprehensive lowcost clipart CD yet produced. All of it's 10,000 files are all in pure draw format. Supplied with a thumbnail viewer which makes finding the clip you want easy. Clips are split into 88 categories, just ten are shown here. The clipart can be used with all DTP applications including Impression, Ovation and Draw.

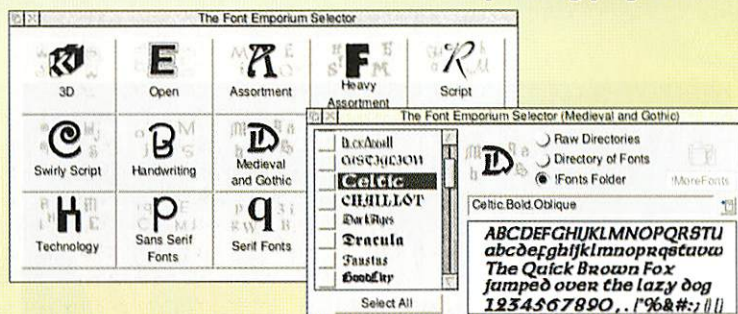
Ten thousand illustrations for DTP work



The FONT Emporium CD

Featuring over 550 different high quality font families. This CD ROM is supplied with a comprehensive font selection application, which splits the fonts into fifteen handy reference groups for easy typeface selection. Our fonts will work with ALL software that supports fonts, including Impression and Ovation. A full set of poster files are supplied to print out for reference.

Over one thousand unique typefaces



Symphony

Masterpieces Collection CD

If you've ever started tapping your feet while playing a game with great music, then you'll love this CD. Well over 3000 music tracks are included on the disc, enough to satisfy even the most avid devotee. Includes Classic, Piano, Rave, Blues and Jazz.

Three thousand stunning compositions



EACH CD ROM COSTS £29.95

BUT ALL THREE COST £69.95 **Offer**

PRICES INCLUDE VAT & POSTAGE

Zenta Multimedia
10 Ravenhurst Drive / Birmingham / B43 7RS
Tel 0121 358 3054 Fax 0121 358 5969



WWW.ZENTA.DEMON.CO.UK



ZENTA



Suite 8c, Newton House, 147 St. Neots Road,
Hardwick. Cambridgeshire CB3 7QJ

CD Recorders

SCSI Cards

CD Rom Drives



Telephone: (01954) 212263 Fax: (01954) 212263
www.eesox.demon.co.uk



Oregon Disc Doctor is a suite of applications designed to maintain and repair all discs.

Resurrect

This is the Acorn utility everybody has been waiting for. Resurrect is able to undelete files, or even whole directories of files which have been inadvertently deleted, with just a few clicks of the mouse.

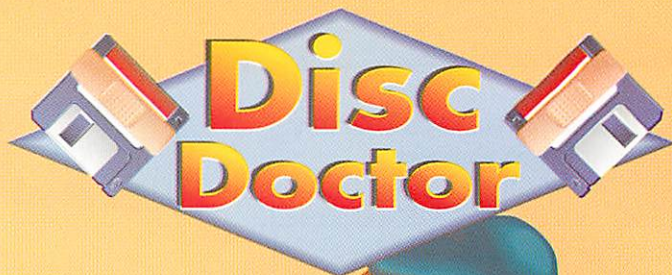
DiscAid

DiscAid is able to check and repair commonly occurring problems with either floppy, removeable or hard discs, including broken directories and faulty disc maps. This application should be run when experiencing a problem with a particular disc, or as part of routine maintenance.

MapView

MapView is able to display the layout of a disc in a graphical manner. This is useful to analyse how a file or directory is stored on the disc surface, or to examine how much of the free disc space is fragmented.

DiscDoctor is designed by Sergio Monesi, the author of FSCK as supplied by Acorn.



RRP £34.95

Special £24.95

Oregon Direct

Oregon Developments

36 Grosvenor Avenue : Streetly : Sutton Coldfield : B74 3PE
Tel : 0121 353 6044 / Fax : 0121 353 6472 : <http://www.oregon.demon.co.uk>

Werewolf Software presents...



A brand new graphical adventure game for your Acorn computer

Available NOW!

Please contact us for more details

Shuggy retails for £25.95
Add £1.50 for carriage in the UK

Werewolf Software, 23 The Spinneys, Bromley, Kent BR1 2NT • Tel: 0181-467 1138
Email: info@werewolf.demon.co.uk • WWW: <http://www.werewolf.demon.co.uk/>

NEW Acorn & RISC PC Net Station

Please call for latest details and prices

CASIO
DIGITAL CAMERAS
QV10A, QV100
and QV300

zip
DRIVES

Robotics
SPORTSTER FLASH

SSS = ?

**SIBELIUS
SOFTWARE
SPECIALISTS!**

The best music processing software in the world, and the best place for a demonstration? The Data Store. Ring first for an appointment – you'll need at least an hour!

**DON'T DEAL IN THE DARK! COME AND SEE THE LIGHT AT
THE DATA STORE**

microcomputers

6 CHATTERTON ROAD BROMLEY KENT BR2 9QN

Tel 0181-460 8991 Fax 0181-313 0400

Email info@datstore.demon.co.uk

CLOSED ALL DAY WEDNESDAY

<http://www.datstore.demon.co.uk/>



GAME SHOW



Purpose: to play Elite

Graham Nelson reviews the BBC Micro emulator from Warm Silence

In the May issue of *Acorn User* I reviewed Warm Silence Software's *Z80Em*, an emulator for the Sinclair Spectrum. This month it's the turn of *6502Em* which revives an earlier generation of Acorns: the BBC Micro Model B, BBC Master, Compact and Acorn Electron – anything except the original Atom.

You might think that Acorn would at least tacitly encourage this, but no: they have an inflexibly petty attitude to distributing their old ROM-based operating systems. The BBC Micro ROM images can only be distributed as part of Acorn's own emulator *65Host*. (The best that can be said for *65Host* is that it's free.) Warm Silence thus have to supply both *6502Em* and *65Host*, along with a rather silly program to copy the ROM images from one to the other. Worse, the BBC Master versions can't be distributed at all, so unless you have a real BBC Master you can't emulate one either.

This minor nuisance is really the only negative point to make about *6502Em*, which is remarkably good, fast and robust. The 'Info' window describes its purpose as 'to play *Elite*', and they're not kidding. *Elite* was a *tour de force* of BBC Micro programming, squeezing an amazing amount out of the hardware, so it makes a good test case.

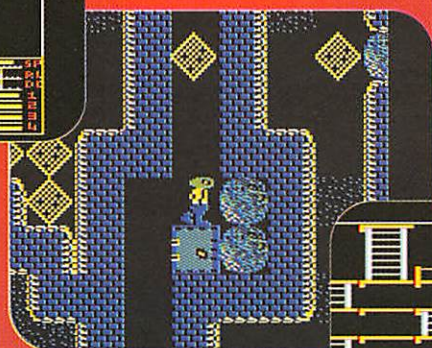
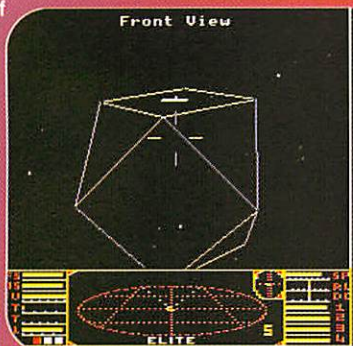
Emulating the hardware

Elite's display is in two screen modes at once – that is, the top two-thirds use one mode and the bottom third another. This requires exquisitely good timing, with the game altering the screen mode exactly as the monitor's electron beam passes through the two-thirds level of the picture. Anyone who's ever tried this, using the interrupt timer on the 6845 chip, may remember that being approximately right is easy – but then the tide mark between the two modes looks choppy, sliding up or down by a few pixel rows as the computation load varies.

Not so under *6502Em* – the *Elite* split screen is sharp to the pixel.

Elite sounds good, too, with an authentic mix of peals, white noise and rising tones. The emulator appears to have no trouble imitating 'envelopes', that is, instructions to the BBC sound effects hardware. An extravaganza like *Ghouls* raises the hair on the back of my neck not because it sounds like a haunted house, but because it sounds so much like a BBC Micro, raised from the silicon grave.

Mode 7 teletext graphics were no problem and sideways scrolling – in which the game landscape scrolls smoothly left to right or vice versa – is also in good working order. I found *Rocket Raid* a little jumpy, but it probably was on the BBC Micro, too;

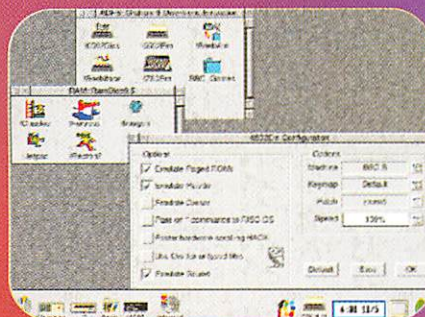


Planetoid was fine. All in all, the only hardware features not emulated are those which can't sensibly be used: the Tube, the serial interface ULA, the shift lock LED and so on.

Since my StrongARM processor clocks over at about 200 times the speed of the BBC Micro's 6502, I didn't expect any speed problems. Nor were there any. *6502Em* is normally configured to emulate at 100 per cent of the BBC Micro speed, which means that on a StrongARM Risc PC it is mostly idle. Cranking it up to 10000 per cent, which really means 'as fast as possible', is to say the least an experience. *Snapper* ran at just over 12 times normal speed, with the ghosts converging on the player so rapidly that an entire three-life game was over in less than five seconds. *Zalaga* is a manic blur, and none of my frogs in *Hopper* ever made it across the road.

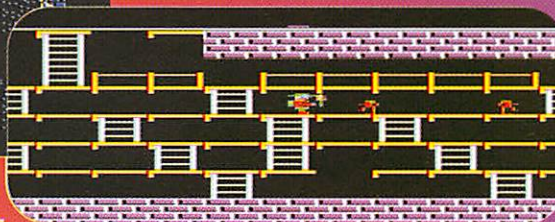
Transferring software

How can you get BBC Micro programs to run on the emulator? One way is to download them from various Internet archives, which keep everything released by the top dozen or so



BBC software houses. If you have old tapes, Warm Silence can supply a simple interface – from the parallel port to audio in/out plugs – and *Tapes*, a program able to read BBC, Spectrum, Amstrad, TRS-80, Commodore or Memotech cassettes. Another optional extra is the *6502 Support Pack*, with a disassembler, a de-archiver and a set of hacks into most of the famous games.

Anyone wanting a BBC Micro emulator couldn't do better than *6502Em*. Highly recommended.



Product details

Product: 6502Em (BBC Micro emulator)
 Supplier: Warm Silence Software
 Tel: (0585) 487642
 Fax: (01608) 737172
 E-mail: Robin.Watts@wss.co.uk
 WWW: http://www.wss.co.uk/
 Price: £15 + VAT or £25 + VAT if bought with Z80Em (Spectrum) emulator
 Pros: Fast • Good hardware support • Correct screen effects and sound
 Cons: Doesn't come with ROMs for BBC Master, Compact or Electron

Product: 6502Em Support Pack
 Price: £8 + VAT or £15 + VAT if bought with Z80Em Support Pack
 Product: Tape Support Pack
 Price: £5 + VAT including circuit diagram for interface. Interface ready-made at £15 + VAT

GAME SHOW



Steve Mumford previews two forthcoming Acorn games

The flowers are blooming; the birds are singing. Spring is in the air, and that must mean it's time for another Show, along with all the rumours and promises about new products that go with it. By the time you read this, the show will be over and the long stream of prospective releases will have been whittled down to a select few, but for now there's a veritable gaggle of embryonic games jostling for position. Two titles in the final stages of preparation are Werewolf Software's *Shuggy* and Skullsoft's *Arya*, and I took the opportunity to give them a quick once-over before their release.

shuggy

Shuggy

Shuggy is a traditional, 2D platformer and follows the adventures of a young elf as he attempts to save his home world from the obligatory evil overlord. Puzzle-based in nature, the game consists of the familiar 'pick up and use' approach in which objects are recovered then put to use at the appropriate point. Not giving too much away, in the demo version there's a piranha-filled fishtank that contains a key tied to the bottom. Not surprisingly, a pair of scissors and a protective glove can be found nearby, and so that particular puzzle is solved.

Shuggy's world is divided into distinct screens, and there's a slight pause as he travels between them – it's not a critical delay but enough to disrupt the continuity of the gameplay. The movement of the

central character is smooth, although he has an odd tendency to perform forward flips whenever he jumps – reminiscent of *Dizzy* on the Spectrum. These acrobatics might account for the loss of control as he flies through the air; careful positioning is required if you want to know where you're going to land. Still, control is simple and it's easy to get used to Shuggy's little eccentricities.

A nice feature is that the game automatically detects whether a high-resolution monitor is being used and, if so, upgrades the quality of the graphics.

The demo is only a few screens in size, but the authors have added some nice weather effects to the forest scene they've portrayed. The demo that's available on the Internet only gives the briefest taste, but if the full program is as varied as the programmers make out, Shuggy should be an enjoyable puzzle-solving game.

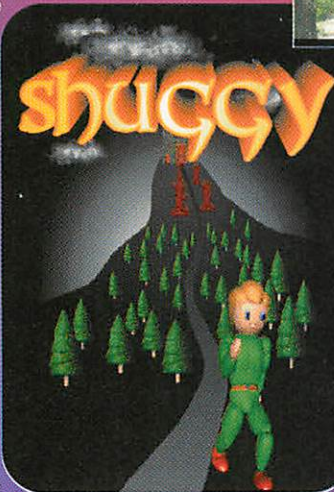
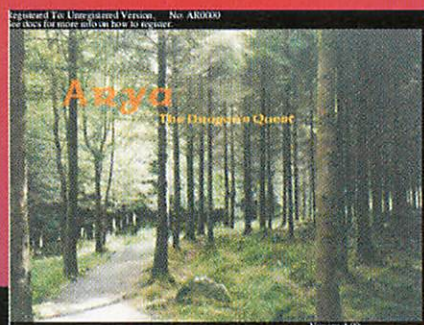
Arya

Skullsoft's *Arya* opens with the experiences of a young man as he's falsely denounced as a necromancer and chased from his home village. On his travels he meets a surprisingly talkative dragon who just happens to need

used for emphasis and key objects are capitalised so that there's no confusion as to which word the parser's looking for. A toolbar is displayed at the bottom of the screen, allowing the user to enter the most common commands at the click of a mouse.

The representation of the game world is quite detailed, and the player's health, armour, encumbrance and fighting ability are all modelled. The passage of time is also simulated, and even if you sit still and don't type a word, the computer-controlled characters will still move around and get on with their lives. Weather even makes an appearance, so you'd better take an umbrella with you.

I've come across several typographical errors but on the whole the quality of the text is good, and this adventure might act as a good introduction to the world of interactive fiction as its difficulty level isn't set too high. *Arya* itself is shareware, meaning that you can try it for a week before you have to register – plenty of time to try out the game's puzzles and discover whether it's for you.



his help, which provides a good excuse for him to become embroiled in a complex quest.

The game is based around a text adventure, but the programmers have added pictures and graphical puzzles to broaden its appeal. They've written their own parser in order to accomplish this, which means that it's not as flexible as some of the more dedicated ones around, but this approach has allowed them to use fonts, graphics and colour to good effect.

Outline fonts are used throughout the game, with the result that the text is clear and pleasant to read. Colour is

Product details

Product: Shuggy
Price: £25.95 + £1.50 p&p
Company: Werewolf Software
Address: 23 The Spinneys, Bromley, Kent, BR1 2NT
WWW: <http://www.werewolf.demon.co.uk/>
Download the demo from the Werewolf Web site

Product: Arya
WWW: <http://www.eganc.demon.co.uk/skullsoft/arya.html>
See Web site for more information as well as the downloadable demo

Yellowstone

Electronic Solutions Ltd

All prices include
VAT but exclude carriage.

DeskTV

Modular multimedia card for the Risc PC incorporating a TV receiver & audio processor. Capture replay files from live TV or take screen shots (saved as sprites). Desktop control of volume, bass and treble. Video input allows connection of video or video cameras. Call for more details.

Standard Card (with tuner) £259
Entry Card (no tuner) £219

Discounts when bought with a plug in option



Yellowstone
Ink-jet and laser
toner cartridges



£ 93
including Octopus
Software

The Octopus Teletext Software and Yellowstone hardware combine to make a superb Teletext plug on option. Saves text pages to files.

CD-ROM Drives

12 Speed £ 85
16 Speed £109



£ 58.74

Digital Sound Processor
Sound processor for
Acorn machines



£93.99

FM Tuner card for
Acorn machines

PC Card Upgrade

for SX/33, DX2/66 & DX4/100
cards. Chip is upgraded to the
AMD 586/133 and active cooling
is also added. Card upgrade takes
14-21 days.
£ 165

Mozart

DIGITAL AUDIO

16-bit Digital Soundcard and
four channel mixer for the Risc PC

£ 70.44

Audio Mixer

4 channel mixer
for the Risc PC.

£ 35.19



£129

with NICAM
£149

Desk DTS is a digital sound sampler for capturing
sound from the DeskTV card. This allows the user
to make replay movies with sound. Also available
NICAM digital stereo sound support.



£ 59

NICAM digital sound card for DeskTV
(This product is not upgradable to
DeskTV DTS due to its manufacture.)

Hard Disc Drives

Quantum Fireball ST 1.6GB £ 162 £ 292
Quantum Fireball ST 2.1GB £ 185 £ 319
Quantum Fireball ST 3.2GB £ 249 £ 379
Quantum Fireball ST 4.3GB £ 290 £ 420
Maxtor Diamond 5GB £ 329 £ 459
Quantum Fireball ST 6.4GB £ 419 £ 549

Enhanced Performance ATA-2 Interface

RapIDE32

Fast 32-bit IDE Interface for
the Risc PC. Attach up to
4 additional IDE devices.

Features now include:

Partitioning software
Syquest/Removables support
Desktop control

"without one you are not doing
your machine or hard discs justice"

£139.83 Risc User, April 1997

Memory

4MB, 8MB, 16MB
32MB and 64MB
available.
Call for prices

Bramingham Park Business Centre, Enterprise Way, Luton, Bedfordshire LU3 4BU.

Tel: 01582 584828 Fax 01582 654440 E-mail sales@yellowstone.co.uk

Visit our Website

<http://www.yellowstone.co.uk>

textease

Simply the Best
Word Processor and
Desktop Publisher

Just click anywhere
and start to type

BETT 97
Gold Award

Talking textease

Best Primary
Software

Softase Limited,
The Old Courthouse,
St Peters Church Yard,
Derby, DE1 1NN
Tel 01332 204911 Fax 01332 609224
Email sales@softase.co.uk



For Windows 3.11 and '95 or Acorn RISC OS3.1

Produced on textease

Statistics with Graphics

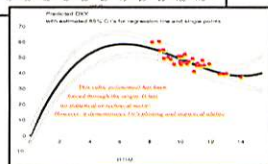
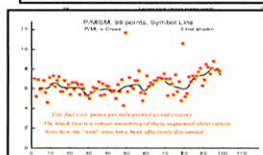
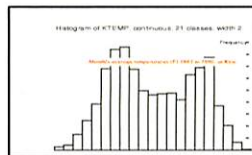
1st

1st now seriously upgraded version 2
products give a choice of user interfaces
with even more statistics and graphics.

1st provides UNEQUALLED statistical
facilities. Drawfile graphics. Easy CSV
interface. Spreadsheet type data entry with
extensive manipulation features. Automatic,
context sensitive manual. Mouse driven,
with optional keyboard shortcuts.

Our products cover statistical require-
ments at levels from GCSE to advanced
research. Education prices from £50 to
£164 depending on the version.

New, unique features for Value Added
Analysis in School Administration.



FREE loan copies. Further info
available from:
Serious Statistical Software
Lynwood
Benty Heath Lane
Willaston
S. Wirral, L64 1SD
Tel: 0151 327 4268

The established statistical packages.

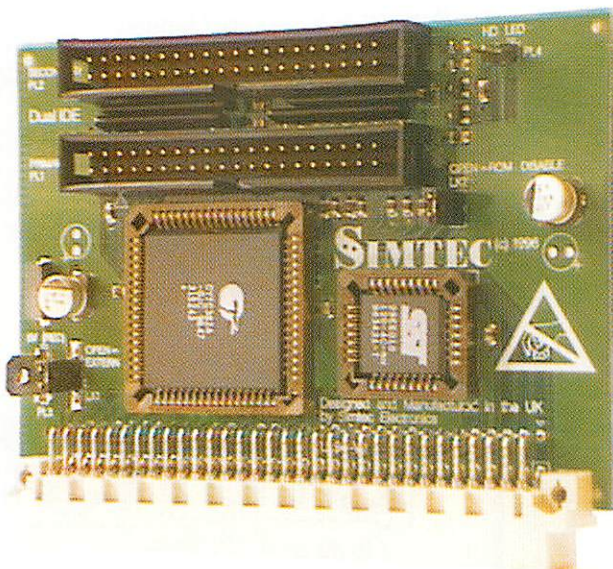
SIMTEC
ELECTRONICS

... the Quality Upgrade

IDE Hard Disc Storage solutions

Using advanced custom logic and the latest surface mount technology, Simtec has created some of the smallest, most integrated, IDE cards available featuring:

- Dual IDE sockets to connect up to four devices per card
- ◆ Drive cables as long as 2m
- Flash ROM for easy software upgrading
- ◆ Support for up to 8 active partitions
- 8 Bit transfer rates up to 1.8Mb/s, 16 Bit up to 2.6Mb/s
- ◆ Built in CDFS and VProtect
- User modules can be added to ROM
- ◆ Requires no backplane for 305/310



Small card..

BIG
Features

£69 INC
VAT

8 Bit mini-podule for A3000, A3010

16 Bit podule for 300, A400/1, A5000, Risc-PC, A7000

Interfaces include IDE manager/partitioning software and machine specific IDE cable.

Custom cabling, backplates and drive mounting kits available separately.

Drives ranging from 340Mb to 6GB also available.

Whatever your machine, if it's memory or storage, choose Simtec, the quality upgrade. A full range always in stock.

Every upgrade is fully tested before despatch and carries our usual two-year warranty.

Prices include UK carriage and VAT @ 17½%

SIMTEC
ELECTRONICS



Race into the future

Steve Mumford looks at Drifter, the new futuristic 3D racing game from The Fourth Dimension

The games drought has lasted long enough, and The Fourth Dimension have emerged from what one could call a period of hibernation to produce a game they describe as their biggest release for some years.

The first time I saw Andrew Docking's game in a playable state, I was irresistibly reminded of a Playstation title named *WipeOut* – for those who haven't seen it, it's best described as an anti-gravity arcade racing game. Futuristic craft tear round 3D circuits that buck and twist; as an added excitement, tokens can be collected to provide upgrades. Most allow you to go on the offensive and missiles, lasers and energy bombs make frequent appearances.

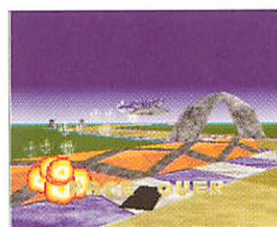
Not a WipeOut clone

Drifter, as I was told, was never meant to be a *WipeOut* clone, and subsequently the ship designs were altered to prevent people jumping to the wrong conclusions. However, I think it's impossible to separate the games entirely; the least one can say is that they fall into the same category.

Drifter differs from *WipeOut* in certain respects, the greatest being that the track isn't as radically 3D – although you can fly through tunnels, the roadway is perfectly flat and the steep slopes and tight turns of the Playstation title are missing. Weapons aren't as diverse either – *Drifter* provides three missiles with which to defend yourself and that's about it.

So, *Drifter* isn't *WipeOut* – that much we've established. Putting that aside, it provides a single-player, low-friction racing game. The action is fast, and once you're travelling round the course at full whack, the sensation of skidding round the corners is strangely satisfying. Eight tracks are supplied, presented in pairs. Prove to be a master of the first two, and you're allowed access to the second and so on.

Each race has five competitors, and you must come home in first or second place to receive any points – fail to score and



you'll remain on the same pair of circuits. There are the usual obstacles to avoid, walls and bridges being the most common, but there are also special floor tiles that have an effect on the ship, perhaps boosting it to maximum speed or sending it spinning out of control.

The craft are reasonably easy to manoeuvre – they can thrust, turn left or right or, if the going's really tough, their lateral boosters can come into play nudging the ship to either side. Provision is made for keyboard, mouse or A3010 joystick input, so all bases are covered.

Using a combination of the controls, it's possible to go roaring into a corner before performing a graceful powerslide and popping out of the turn ahead of the opposition.

There are three craft to choose from, and although they look very similar, as their power increases, handling decreases and it's vital to learn how to control them at high speed through the tight turns to stand any chance of winning.

The graphics engine

What about Andrew's *Perpetual Motion* graphics engine? It's capable of producing some nice visuals, and the menu screens are pleasant to watch as the 3D buttons fly in and out. A choice of camera angles is available; not all are particularly useful but they do provide variety. The textures are perhaps a little garish during game-play, and without track and object detail set to maximum, it can be hard to tell what's going on.

That brings us on neatly to the speed of operation – on an A5000, it's just playable

at full detail, although it doesn't provide the type of screen update I was hoping for.

Turning down the track detail increases the speed of response of the ship and you get a much smoother ride; however, as a result the track loses its clarity and gives the impression of flying over coloured graph paper. Lowering the detail of the objects (walls, bridges and craft) turns them into shapeless blobs, and tracking their movement on the screen becomes very hard. Those with Risc PCs or StrongARMs shouldn't worry; *Drifter* becomes much more fluid when running on a faster machine.

Conclusion

Drifter is certainly a step in the right direction and will provide some amusement, but although the ships handle nicely the game still feels a little raw, and it lacks the addictiveness and the instant appeal of products such as *Stunt Car Racer 2000* or *StarFighter 3000*. However, the game and the manual both make reference to *Drifter II*, so I'm hopeful that the author will tinker with the already competent game engine and go on to produce a real world-beater.

Product details

Product:	Drifter
Price:	£34.95 inc VAT
Supplier:	The Fourth Dimension
Address:	PO Box 4444, Port St Mary, Isle of Man IM99 7RS
Tel:	(01624) 836744
Fax:	(01624) 836745

Greg Scott creates some bells and whistles for the graphics engine

rev r o t u a l i t y

part 4

This month we'll be making a few small changes to the source code, as well as adding brand new features such as windows and doors. Objects can wait until next month – they'll be the last addition to the engine. Firstly, however, something slightly less impressive.

It seems that because so much time has been spent on the core of the program, the rendering process, a few areas

of optimisation have been missed. The following lines (used in moving the viewpoint) are taken from last month's code:

```
x_cell=view_x/CELL_X_SIZE;
y_cell=view_y/CELL_Y_SIZE;
x_sub_cell=view_x % CELL_X_SIZE;
y_sub_cell=view_y % CELL_Y_SIZE;
```

At 20 frames per second this code would amount to over 80 division instructions — a figure which certainly cannot be accepted in a real-time engine. Fortunately, the optimisations required should be fairly obvious already. The cell size is 64 which is a power of 2, so using binary shifting we can speed things up enormously:

```
x_cell=view_x>>6;
y_cell=view_y>>6;
x_sub_cell=view_x & 0x003f
y_sub_cell=view_y & 0x003f
```

In terms of ARM code instructions we

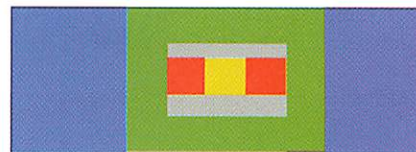


Figure II

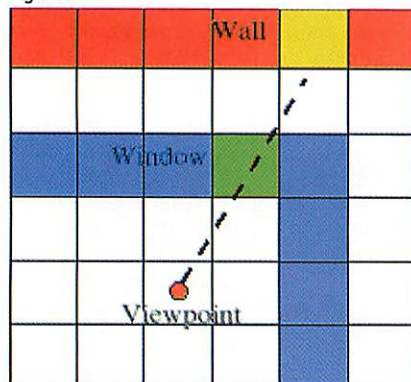
have transformed four lengthy division routines into a few ADD and MOV instructions — a vast improvement to help shave off those processor cycles and up the frame rate.

See-through walls

To allow windows and other see-through walls to be used in our game we need to make some changes to the way that we perform the ray-casting process. In the current engine a ray is cast out from the viewpoint until it intersects with a wall. In order to see through a window or hole we must continue to cast rays beyond the first intersection to know what lies beyond the transparency in the wall.

Figure I illustrates how we must continue to track the ray after a collision

Figure I



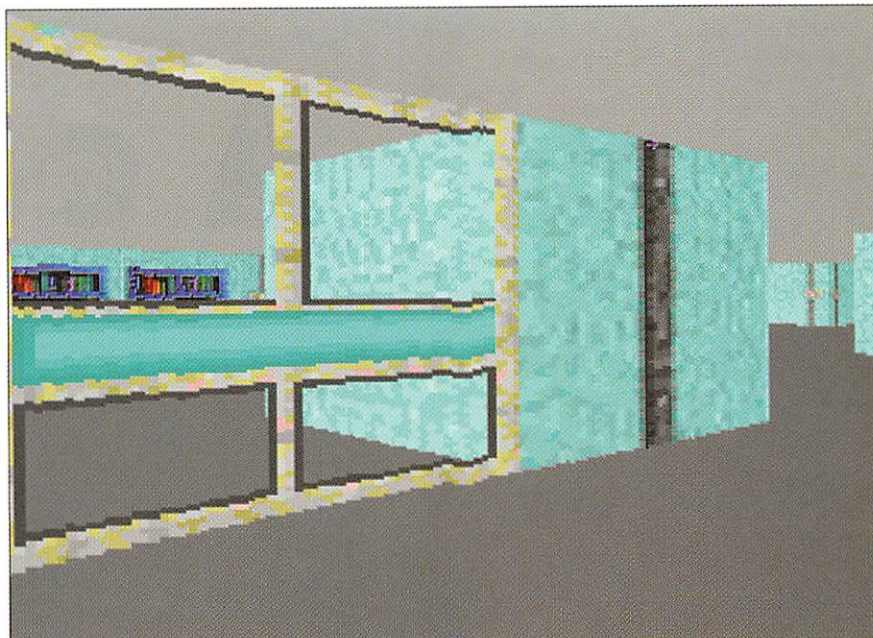


Figure III

Figure VI

```

11111111335111111111111111
155555G          3      1AAA
15   5G          1      1AAA
15   5111311     3C 7    5AAA
133733111111    5AAA
13      131      3      1AAA
13      111      1      3C 7
15      11171111953333AAA
11      51      11      1C 7
11      53      31      1AAA
11113 31113  311311 111331

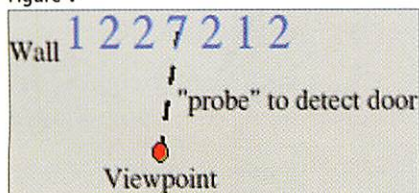
```

with a transparent tile, represented by numbers 9 and 10 in our world file. Once the ray has hit a normal wall we can then draw the column of the screen correctly.

Firstly we render the furthest wall away using the normal *ourlib_sliver()* function. On top of this "underlayer" we draw the sliver for the window tile. For this stage we must use a different version of the sliver renderer: *ourlib_sliver_mask()*. This function is almost identical to the usual renderer except that it treats any black in the graphic (colour zero) as a mask — nothing is drawn in its place.

The result of this layering produces the desired effect — it is possible to see into other rooms and corridors through transparent walls. Figure III is a screenshot showing how windows can be put to good effect in the world. Notice the new graphics in use (Figure IV) — these are the actual graphics to be used in *AUAttack*. The new lines of code needed

Figure V



to implement transparency are so similar to the existing ray casting code that there is no need to describe it any further. Browse through the new *ana_raycaster()* function to view the updates and a few minor improvements that tidy things up somewhat.

Restrictions

The new transparency system is slightly limited in terms of its capabilities. You should remember the following rules when adding windows to your world:

- The simplistic nature of the system means that you can't have a window onto a window
- Windows are best located with walls either side of them
- Adjacent windows don't always produce a correct effect.

It would easily be possible to correct the first problem by storing window sliver information in an array rather than in single variables. That way you could have rows upon rows of windows, though quite what for is beyond me.

Doors

This month we shall add a very simple implementation of doors to the program with some more code inside the *main()* function. For now we'll use the space bar to open doors in our world, though (as with all the other keys) it can be changed to suit your preferences.

To open a door we first need to work out if the player is close enough to open it. This is done by casting out a door-seeking "probe" from the player (Figure V). We must then test to see if this probe has ventured inside a grid square representing a door (we'll use numbers 7 and 8). If there is a door present we can begin to open it. Otherwise we leave everything alone — no door is near enough to the player. The door routine is very small, and almost identi-

cal to that of the viewer movement code:

```

dx=dx_table[view_angle];
dy=dy_table[view_angle];
door_x=
(int)((view_x<<16)+(dx<<3))>>16;
/* calculate x and y of "probe" */
door_y=
(int)((view_y<<16)+(dy<<3))>>16;
/* using same methods as moving */
x_cell = (int)door_x>>6;
/* work out the cell which the probe
resides in */
x_cell = (int)door_x>>6;
y_cell = (int)door_y>>6;
if(world[y_cell][x_cell]==7 /* or
whatever number you like */) /* is it
a door? */
{
world[y_cell][x_cell]=0 ; /* delete
door square */
}

```

In the above example, to open the door we simply delete the door square and the entrance is opened. This instant result isn't exactly realistic — it might be better to include some sort of opening animation. This coupled with some new transparency features could give some impressive results. It is, however, left as an exercise for yourselves.

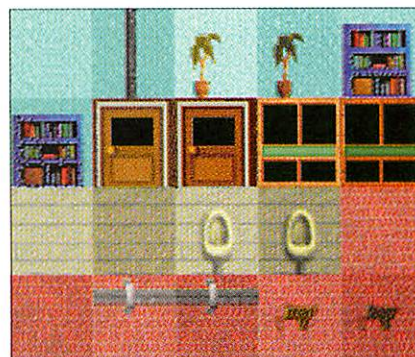


Figure IV

Acorn

Virtuality

Figure VIII

Window Size	Frames/sec
320 x 256	113
288 x 200	145
288 x 160	162
128 x 128	426

More tiles

After many months of world-building it may have come to your attention that even though 20 tiles are available in your graphics file, the digits possible in the world text file only reach nine — in essence halving the variation of your level. This has now been remedied and the letters A, C, E, G and I can now be used to incorporate the previously unused tiles.

Check out the *aaa_world()* function inside this month's source to see the changes made to convert the letters into their appropriate numbers in the world data array. Figure VI shows an extract of the new world file on this month's cover disc, which now makes use of all 20 tiles.

The command line

An extremely useful update we can make to the !AU_Attack application is that of command line arguments — passing the

program a number of parameters to change the way in which it behaves. The parameters we shall pass to the engine are illustrated in Figure VII.

Using this method of executing the program we don't have to alter any of the source code to change variables such as window height, width and viewing coordinates — we only have to change the figures in the "Run" file. The following example calls are described along with their effect:

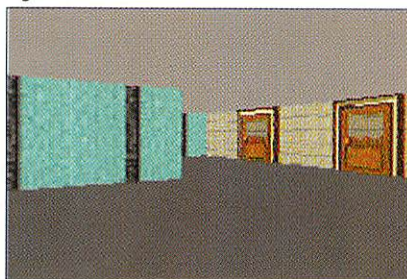
```
engine 400 400 200 128 128 768 8192
```

400,400,200 (ang) viewing coords, 128 by 128 window and 60 degree FOV

```
engine 1024 800 0 288 160 1728 10800
```

1024,800,0 (ang) viewing coords, 288 by

Figure IX



160 window and 60 degree FOV.

To program this feature we need to make use of C's built-in system for passing parameters to the *main()* function. In past versions of the code the *main()* function has been declared as follows:

```
void main(void);
```

Now, because we are looking to pass variables into this function we must alter the way in which it is declared:

```
void main(int argc, char *argv[]);
```

The names *argc* and *argv* are traditional but arbitrary. The integer variable holds the number of command line arguments passed into the function. The program name is treated as an argument itself, therefore *argc* can never be less than one. In our case it should be eight, because we are passing seven numbers to the program. We must be careful to ensure that the correct amount of information has been entered, or else errors may occur at a later stage in the program. You can examine the code itself to exactly how this is done.

Next month we'll be looking at objects within our game world and how we can move them around.

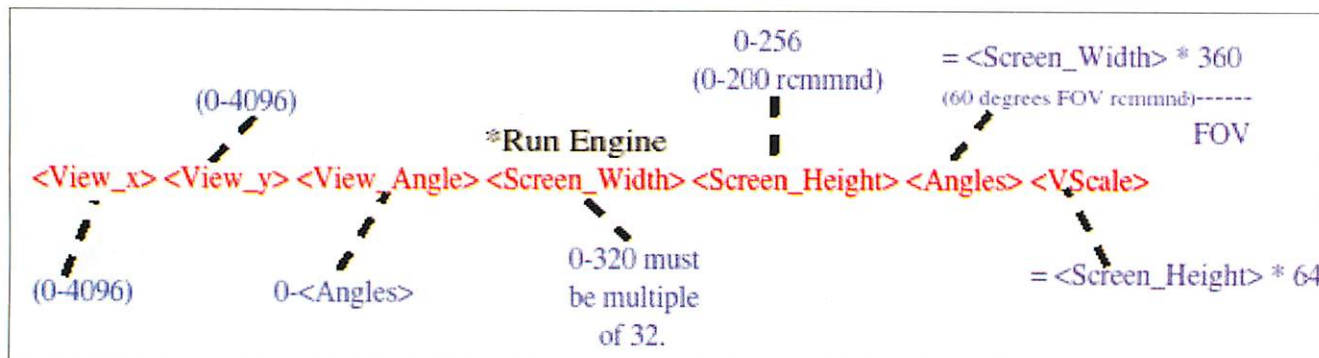


Figure VII

EFF PROFESSIONAL TYPOGRAPHY

ELECTRONIC

font
F.O.U.N.D.R.Y

EFF Professional Typography CD

Highest quality fonts for Acorn

At the Electronic Font Foundry we are, and have been for the last 14 years, committed to contributing to the development of new typefaces that preserve the highest standards of traditional typographic design. All our fonts are designed especially for Acorn, all of them are carefully hand-hinted and contain all the appropriate skeletons. We are the only supplier of exclusively high quality Risc OS typefaces.

Our new CD, EFF Professional Typography CD is the first CD of professional quality Acorn fonts. And the only Acorn font CD made by typographers. You simply won't find higher quality anywhere else.

EFF Professional Typography CD

- Contains 500 original EFF typefaces – a wide selection of EFF standard fonts (ask for EFF Professional Typography Leaflet to see the samples of all the fonts included)
- All fonts are suitable for all West European languages – full Latin 1 character sets
- All fonts supplied in Risc OS 3 (standard) and Publisher formats (for even better results from PostScript™ printers and imagesetters)
- All fonts are hand-hinted by skilled typographers and contain all the appropriate links and skeletons
- Produces superior results on both screen and paper
- Great compromise on price – less than 12p per font for private users
- No compromise on quality – highest standards guaranteed

EFF Font Poster 1997

New **EFF Font Poster 1997**, size B1, glossy paper, displays samples of EFF entire library of high quality typefaces. Fonts are divided into seven broad categories (Sans, Serif, Script, Display, Educational, Symbolic and Foreign: Cyrillic, Greek, Hebrew and Indic) to provide reference at glance. **EFF Price List 1997** is now also available, and new prices are lower than they have ever been, with all standard OS3 fonts costing just £5 + VAT each! Ask for your copy of EFF New Poster and Price List. There are also additional leaflets available on **EFF Professional Typography CD** (see above), **Special Educational Fonts** and **Indic fonts**, so if these are what you are interested in why not ask for a copy? Just fill in and post the slip below, alternatively you can telephone, fax or e-mail your request.

FREE 4,000 PD Fonts CD

EFF FREE 4,000 Public Domain Fonts CD is still available for the handling charge of **£2.35** and a self-addressed label (postal orders only, £3.00 for Europe, £5 for the rest of the world), or free with every order from us. The CD is the largest collection of PD fonts for Acorn, which we have brought to a higher standard than any other fonts CD on the Acorn market... apart from EFF Professional Typography. So if you are looking for a budget solution, apply for your copy before it's too late!

Name

Address

Postcode

Please tick here if you are a previous EFF customer ☐

Please send me:

EFF 1997 Font Poster and Price List ☐

EFF Professional Typography leaflet ☐

Other information: ☐

I wish to order a copy of EFF Professional Typography CD and require:

Private User Licence (£58.72+vat) £69 ☐

School Licence (£84.26+vat) £99 ☐

Business Licence (£126.81+vat) £149 ☐

Total (overseas orders please add £1.50) £

I wish to pay by cheque ☐ or credit card ☐. My credit card number is:

exp /



Rambles through Acorn Wood

Another selection of problems and solutions from **Mike Cook**

If you were interested in making my FM radio adaptor in the September '96 issue I have some good news – a supplier has them for sale for about half the price I paid. They cost £15 with £1 P&P and are available from: Paul Lourdan, 2 Ferniehill Place, Edinburgh EH17 7AU, Scotland. Thanks to Tassilo Halbritter of Austria for putting me on the right track.

You might remember that last month Mr W A Jeffs was having trouble with some PIC chip blower software from Maplin running on the PC side of a Risc PC. I managed to contact the author, David Tait, over the Internet and it turns out that he works only 200 yards away from my office.

He explains:

There are a few things I do that may not be compatible with your reader's setup:

- I try to get the base address of the printer port hardware from low BIOS memory
- As you suspect I do direct port I/O
- I access the PC timer chip directly too

I would need to know a bit more about what is and isn't allowed before I could be confident of modifying the program to work on Acorn/486 machines. On the other hand the full source of my software is available so perhaps someone more familiar with these machines could do the port.

That just about spells out why the software would not work. It's the direct addressing of the hardware that does it. You could rewrite the software so that the input/output went through the BIOS calls quite easily but, it's the access to the timer that could be difficult. If you fancy a go at this the C source code is on the net at <http://www.man.ac.uk/~mbhstjdj/files/>

However, I got a native Acorn system working last week and though it still needs a bit of tidying up it should be appearing in a magazine near you soon.

Phil Hughes, from Essex is trying to transfer files across computer platforms. He writes:

I have a 400 series Arc with no CD-ROM (the upgrade path is expensive!). I also have a PC which does have a CD-ROM. Is it possible to download files (clipart, fonts, utilities) from an Acorn ROM disc on the PC machine, via floppy, that can then be used on the Arc? Obviously the snag I've hit is that anything saved to floppy is in PC format and cannot be read by the Arc. Is there a software conversion utility?

All modern Acorn machines can read PC discs straight from the desktop – even from the outset the A310 could read them by the use of utilities. As I no longer have my A310 I can't look up what they were called but there were at least three. Try

contacting a PD library; they are bound to be able to supply one. As an alternative you could hook up the two computers through the serial ports and transfer the stuff across using simple comms file transfer software.

Craig Anderson has been trying the I²C interface and found it lacking, he writes:

I have knocked up a simple circuit based on PCF8574 devices and interfaced it to my A3010. Everything worked OK, however the data transfer speed was nowhere near what I had hoped for (taking approximately 3mS to send a single byte). I²C devices are able to transfer data at 100 Kbps (in fact some newer devices can manage 400 Kbps).

How is I²C implemented under RISC OS? (I haven't gone as far as disassembling the I²C module) Can it be persuaded to run faster? Is the SCL clock rate programmable?

The I²C interface bus is implemented entirely in software and that, in part, limits its effective speed. If you make the clock faster you have trouble with latency – that's looking for a clock signal and making sure you will see it when all the interrupts are going off. In the current implementation the clock signal is not programmable. The drives have changed little since the first Risc computer. Now however, as processors have got faster it is possible to speed things up somewhat. A module written by Baildon Electronics will speed up this bus. They've allowed me to distribute it and you can find it on the cover disc.

I e-mailed him the module and, via the magic of the internet, Craig replied:

The I²C module you sent me worked like a dream. Performance is around five and a half times faster than the original (on an A3010) and around four times faster on an ARM3 A410. Many thanks.

Jonathan Brady has design ambitions. He writes:

I am thinking of designing an Acorn joystick module. Basically I am considering using the I²C bus to provide the main hardware, and a ROM chip for the controlling modules. Could you possibly supply me with or refer me to somewhere where I can get circuit diagrams to implement a ROM chip. The chip does not need to be big. My exact requirements are unknown but are likely to be less than 128K (other software may be included on the chip), but it might be useful if an EEPROM could be used (although cost might be prohibitive) and if more than one chip could be placed on the board at a later date. Any help would be appreciated.

The I²C bus is fine for implementing a joystick but the cost of putting the controlling modules in

EPROM could be prohibitive. When most modern computers have a hard drive it is much more cost effective simply to arrange a file to load during boot up. To use firmware you need to implement nearly the whole of the expansion card interface – it matters little exactly how big the ROM is. This involves quite a lot of hardware and in my opinion is simply not worth it for your proposed application. It would certainly rule out any commercial viability for the project. For your interest there is an Acorn document describing the expansion card specification. There might be a later version but the one I have is Acorn part number 0472,200 Issue 3, January 1992. I am not sure if it is still available from Acorn.

I had an e-mail from Llewelyn Richards in New Zealand:

In New Zealand we have a long-running Commission of Inquiry into possible tax scams. On the TV news we have seen pictures of lawyers questioning businessmen who 'can't remember' what happened to a million dollars, or Serious Fraud Office staff who admit that they gave an opinion after examining boxes full of documents for a couple of hours at the most. It's locally known as the Wine Box Enquiry because the documents first emerged from the boot of someone's car in a wine box.

In the Commission's hearing room every lawyer and the Commissioner has a computer monitor which are all lying on their sides. You can see the grid-work that is usually at the bottom on one side, and all the screens are in the 'portrait' shape, showing the whole of an A4 page at a time. Commercial screens oriented in this way are available, but all those at the wine box inquiry are 'landscape' screens rotated through 90 degrees. What needs to be done to get an A4000 such as I have, or any more recent Acorn, to turn its display through 90 degrees so I can put my monitor on its side and see and work on the layout of a whole A4 page at a time?

I have seen this trick pulled on a Mac many years ago. There was a monitor you could rotate through 90 degrees. As you did so there was a switch that sensed this and the software changed the way words were displayed on the screen so you got a portrait display and not a landscape one. I wondered if there was something you could tap inside the Acorn machine so I asked David Walker at Acorn. He said:

"Errr... wibble. We have had NewsPAD working in both portrait and landscape by using the somewhat crude procedure of grabbing the screen as a sprite, rotating it through 90 degrees and displaying it but this seriously chews on system performance. There is no software for distribution



available to do this job. Personally, I'd recommend that he goes for a hardware solution (although swapping the X and Y sawtooth generators around and recalibrating the convergence etc for the new tube geometry is not a job for the fainthearted!)"

Not for the faint hearted indeed, still I think there should be a more elegant solution around. Anyone fancy working on that?

Malcolm Ripley has been trying to speed up an already fast computer. He writes:

Does RMFaster work on a Risc PC 700? The reason I ask is that this does not show any difference when used on my machine. I ran the following program with ROM and RMFaster basic on my old A310 and my Risc PC 700:

```
T% = TIME
FOR A% = 1 TO 100000
A=SQR(SIN(45))
NEXT A%
PRINT "This is ";TIME-T%
```

The timings obtained were:

1 My old A310	Result = 843
2 My old A310 (RMFaster BASIC)	Result = 829
3 Risc PC	Result = 441
4 RiscPC (RMFaster BASIC)	Result = 441

This seems to prove that my RAM is clocked at the same speed as my ROM which leads me to three conclusions:

- RMFaster is not supposed to show an improvement on a Risc PC, so why have some readers sent in hints and tips suggesting otherwise?
- My ROM is clocking as "fast" as RAM – unlikely
- My RAM is clocking as slow as ROM – my main suspicion

This is the sort of reader I like because after a few days he supplied an answer:

I was informed from the Beebug man that my timings may be due to the program executing entirely in the cache – something I never thought of. So I changed the test so that this would not be the case. Hey presto – RMFaster is faster! Problem solved. Although I am still curious as to how the IOMD chip works with respect to clocking the RAM and ROM. The old A310 (which I still have) could be speeded up by 'programming' the MEMC chip. Is the IOMD similar or possibly smarter, so preventing the speed freaks from blowing their memory?

The problem here, if you can call it such, is that the Basic interpreter is filling the cache so it does not matter at what speed the memory that holds

the interpreter is clocked. However I am surprised at the results that seem to show that the Risc PC is only twice as fast as the A310. I ran this test and got a value of 66 on my RPC 600 with StrongARM processor. By the way, that SIN calculation – remember it takes in values in radians not degrees.

I did mention this to Dave Walker at Acorn and he came up with this very interesting snippet:

"RMFaster is now heading towards deprecation; it is no longer guaranteed to move ROM-based modules into RAM for execution, as this process can hang the machine for some modules written in C. We've applied sanity checking such that 'suspect' modules won't get moved. It still works on some modules (particularly assembler-written ones), but Your Mileage May Vary."

Dave Lawrence wrote back to me this month. He says:

Thanks for your advice a few months ago about connecting an old SCSI hard drive to my A3010. You suggested buying a printer port interface (which I finally got round to doing over Easter) but I'm not sure that you're aware of the following drawbacks:

- The maximum drive size it can handle is 500Mb
- The interface takes its power from the first device in the chain (not the computer). Not all devices can provide this power (called termination power), although if that's the case a separate upgrade can be bought
- The interface is not compatible with all makes of CD-ROM drive
- Incidentally, it does come with a filing system which can handle removable discs.

Anyway, now to the problem. I have a SCSI cable which has 25-way D connector at one end and a 50-way centronics-type connector at the other (I understand this is standard). Unfortunately, the drive has a different type of connector – it is a 50-way male socket with two rows of pins lined up vertically (not offset as in D).

I have managed to find a connector to fit it. I don't know if you've seen this type on a hard disc before, but what I would like to know is whether it has the same pin out as the centronics type connector.

In other words, if I remove the centronics connector from the cable, put the wire that was connected to pin n on the centronics connector to pin n on the new connector, would this work?

You will find the problem of the maximum size of the disc is due to RISC OS not the SCSI interface. What you need to do is partition the disc. While I don't know of a way of partitioning an IDE disc,

most SCSI format utilities will allow you to split a large drive into a number of seemingly separate discs. Remember however, that although they appear as separate discs it is in fact the same physical device. A student forgot this and backed up all his work on what he thought was a separate disc. When it crashed he lost the lot.

The cable with a 25-way D type connector on one end is not the standard SCSI connector. It is used by Macintosh computers to connect the computer to the first SCSI device and some Acorn interfaces also use this type on the expansion card.

The standard SCSI connector is 50-way Centronics type of plug. However, internally fitted SCSI devices use a 50-way IDC connector – it's perhaps this type you have. The pin out of the two types are the same, so a small IDC lead with the appropriate sockets should complete the conversion. I wouldn't recommend trying to remove one plug and replacing it with another.

Finally John McIntyre wants some fundamental interfacing information:

I want to control the parallel port of my Risc PC and have read some of your articles in *Acorn User* but don't understand how to drive and read from the parallel port.

There is no reference to the Sys Parallel Op call that you use in your Pport Mod and !PortMon program in my copy of the Programmers Reference Manual. Can you tell me where to find out about this or explain to me?

The calls are documented starting on page 477 of volume 2 of the RISC OS 3 version of the Programmers Reference Manual. However, there is really nothing to them if you look inside any of my applications.

The first number you pass determines the function. A 0 will read the status and data registers, a 1 will write to the data register and a 2 will read/write the control register.

This last one is perhaps the most tricky as the value in R1 (the second number you pass) is an EOR mask and in R2 (the third number) is an AND mask. Then the new state of the control register is equal to the old state AND R2 then exclusive ORED with R1.

The values returned are the old state of the control register in R1 and the new state in R2. When passing a 1 to the Parallel_Op call the second number is the one that is written to the data register.

Finally when passing a 0 to the routine the data register are returned in R1 and the status register in R2. Your best bet is to experiment with one of my working programs and get a feel for what each does.

How can you help your children when they know more than you?



A guide to education for 3-11 year olds

Parents & Computers is essential reading for anyone with children concerned about how computers are used in school, standards of education and how you, the parent, can make a real difference.

All you have to do is send off the coupon to the address below and we will send you the latest issue of this outstanding magazine for just £1.50, filled with features and reviews of the best education software around.

Parents & Computers £1.50 Offer

Please send me the next issue of Parents & Computers. I enclose £1.50 in coins

Name

Address

Tel

☐ I don't wish to receive any additional promotional materials.

Send to: Parents & Computers, £1.50 Offer, Media House, Adlington Park, Macclesfield SK10 4NP.



Dave Acton and
Dave Lawrence
present five pages of
fractal fun and frolic

st☆r Info

Little protection

Author: David Gamble

It's quite amazing how much damage you can cause to, ahem, 'your' computer by a little careful/less use of the CMOS RAM. Configuring alien monitor types, removing your font cache, setting up half a dozen extended DOS partitioned CD-ROM drives or even just making the keyboard auto-repeat something slllllllllllllllllly.

David Gamble is one of the many people who have sent us CMOS RAM protectors over the years, but his scores highly in our rather bizarre rating scheme because a) it's actually two tiny BASIC programs and b) it took us about half an hour to work out what those 179 bytes actually did!

The two progs are cunningly called *On* and *Off*. To protect your CMOS RAM run the former; to restore control over those battery-backed bytes run the latter.

How it works

HOW IT WORKS
We've been sadly neglecting our *How it works* section in recent times, so we thought we'd make an effort now and explain the workings of David's prog.

To help you a little to start with, we have 'uncrunched' the lines first.

DIM var 16

Set up a small block of memory from which

we are going to set a system variable.

```
SYS "OS Module",6,,,16 TO ,,mem
```

Claim 16 bytes of memory from the RMA.
This is going to contain a small piece of
code and so needs to be in a non-'volatile'
area of memory

```
!var=mem
```

Store the address of this block in our variable

```
SYS "OS SetVarVal", "zzz", var, 4, 0, 1
```

Create the system variable 'zzz' - 4 is the length of the variable and 1 is the type (a four-byte integer)

```
!mem=&E35000A2
```

```
mem!4=&11A0F00E
```

```
mem!8=&E8BD8000
```

Create our piece of machine code

SYS "OS Claim",6,aB%,4

Claim the ByteV vector (number 6). Those three hex values are actually the ARM instructions

```
CMP r0, #&A2
```

MOVNE pc,r14

```
LDMIA sp!, {pc}
```

By claiming the ByteV vector, this code is called every time an OS_Byte [*FX] call is made.

It checks to see if R0 is 162 and passes on the call if it is not, if it is, an attempt has been made to write to the CMOS and the return address is popped off the stack instead, thus preventing the call from happening.

To undo the protection, the OS_Claim needs to be released.

For this to happen properly the address claimed needs to be given to OS_Release. This is the reason for the 'zzz' system variable. The *Off* program looks like this:

DIM var 8

Make space for reading the variable

```
SYS "OS ReadVarVal", "zzz", var, 4, 0, 1
```

Read the value of `zzz`

```
SYS "OS Release".6,!var.4
```

Release the claim the ByteV vector

```
SYS "OS Module",7,,!var
```

Free the memory claimed from the RMA.

If you run *Off* more than once, you will receive the wonderfully informative *Bad Vector Release* error as no error protection is built in!

The perfect chime

Author: Alan Minns

Chimes is an update to Jonathan Rawle's original church bell chime prog we featured in the December 1996 issue. In the words of (new) *Chimes*' author **Alan Minns**:

'I must admit that my introduction to both computers and programming began when memory was both scarce and expensive, and when chips were either square-section prisms of fried potato eaten with fish or were the result of over enthusiastic applause with one's spoon on the edge of a tea cup!'

Quite. He continues:

'Resulting from the conditioning of those days, I tend to be mildly concerned when a fun type application like *Chimes* takes up

a whole page of memory in addition to the 14K of the voice module in RMA. I succumbed to the temptation of rewriting it as a self-contained module and this is the result. Although I did alter the timing a little, the main change is that the program no longer redefines the number of voices. Instead, the bell is assigned to channel one only for the duration of a chime sequence. Whatever voice had been assigned to the channel is then restored.

Altogether a much better state of affairs, we're sure you'll all agree.



Icon see for miles

Author: Joe Kelleher

IcoConv is a utility from **Joe Kelleher** that converts Windows icons to RISC OS sprites. This one differs from others in that it can also read sets of icons stored in .EXE, .DLL or .JCL files.

Click on the iconbar icon to bring up a window showing all the icons currently stored in the program. To load in new icons, drag a file either to this window or the iconbar icon. Files between 766 and 768 bytes long are interpreted as .ICO files, and other files are interpreted as .EXE, .DLL or .JCL files (there is one handler for all three, as the formats for these are all very similar). Any three-letter DOS extension (separated by a "/") will be removed from the name the icon has in the saved sprite file.

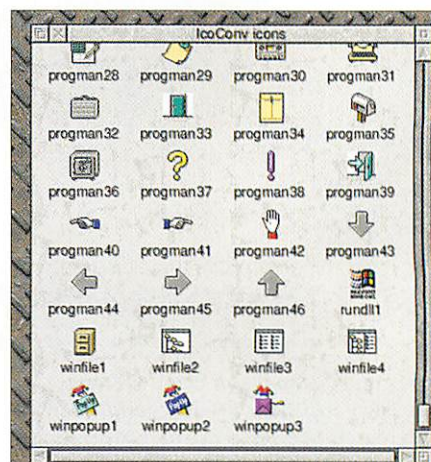
A menu of options is available from either the main window or the iconbar. 'Save icons' will bring up a save box from where you can save the icons currently stored in the program. They will all be saved in a single sprite file. You can save the icons either as 16 colour Mode 27 sprites with a Windows palette attached, or as 256 colour Mode 28 sprites with no palette.

Select 'Clear icons' to remove all the

icons currently stored in the program. All the memory previously used by the icons will be freed. Select 'Scan for icons' to bring up a window then drag a directory here to scan its contents for files containing icons. Click 'Go' and a Filer_Action-like window will appear which will scan though the files, loading in any icons it finds.

The 'Report errors' option on the menu can be ticked or unticked. If it is ticked, an error message will be generated if you try to load in a file which cannot be interpreted as a file which *could* contain icons. If it is unticked, any bad files will simply be ignored. This could be useful if you want to drag a collection of files into the program, only some of which are capable of containing icons, and don't want errors to be generated for those that aren't. Note that some executables written for early versions of DOS cannot contain icons, and an error message will be displayed if the Report errors option is ticked and you try to load such a file.

If you have a PC partition, you can try this program on some of the files in there. Your Windows directory (if you have Windows installed) should contain a fair



number. It would be inadvisable to do a scan on the entire PC partition if large collections of icons are to be found there.

You can also find .ICO icon archives on PC bulletin boards and Web sites. You should also look out for a Windows program called *Icolib*, which contains about 5,000 icons as .JCL files. By registering *Icolib*, you can receive a further 5,000 icons or so.

Dezintegration

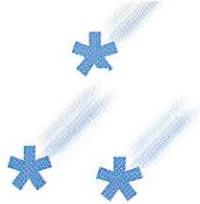
Author: James Andrews

Our long running library of graphical excursions is extended this month by **James Andrews**. His contribution *Zinter* is based on a very simple idea and is surprisingly effective for such a small program. It draws a circle slowly spiralling out from the centre of the screen. It is plotted in a random colour and, in James' words, is EORed loudly. The terribly cunning bit is that after every circle is added a small

piece of machine code is called which decrements the value of each pixel on the screen by 1 – unless it is already black. As a result, the image built up slowly disintegrates from the middle outwards.

We tried updating the program to use a fully programmable 256 colour palette but quite unexpectedly the results were decidedly poor when compared to the original Mode 13 fixed palette.





Cloud cuckoo

Author: Tim Tyler

Our previous cloud challenge attracted a huge variety of submissions and although we announced the winner in the May issue, we did receive one other entry which we thought was worthy of a piece by itself. This is *CloudCult* by **Tim Tyler**. In operation you may well notice its similarity to Tim's popular *Texture Garden* program – we're quite happy with this as he's gone out of his way to produce a couple of dozen very 'cloudy' textures. Tim says:

'Cloud Cultivator generates cloud images using a range of techniques including inverse two-dimensional fast-fourier-transforms of filtered noise. Genetic methods are used to seed them enabling breeding, selective mutation, cultural transmission of colour and sexual recombination to be implemented. The program supports seamless tessellation, 24-bit colour and full control over cloud animation. The program can generate static images of clouds which may be saved, and mutated offspring may be generated. Different

species of clouds may also be sexually combined to generate new images. It can

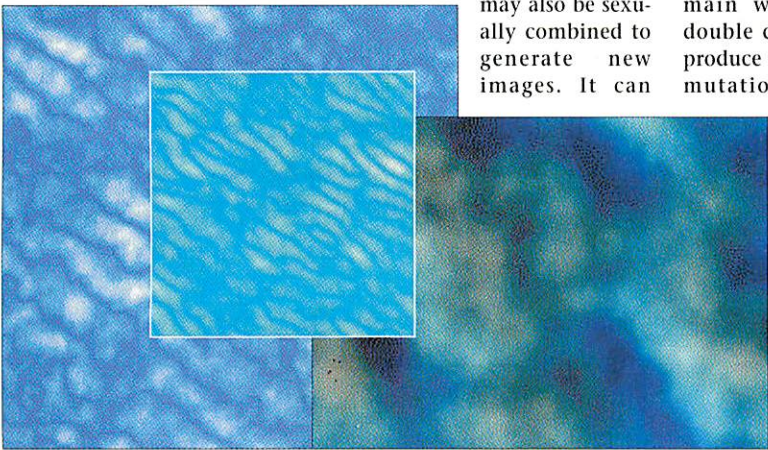
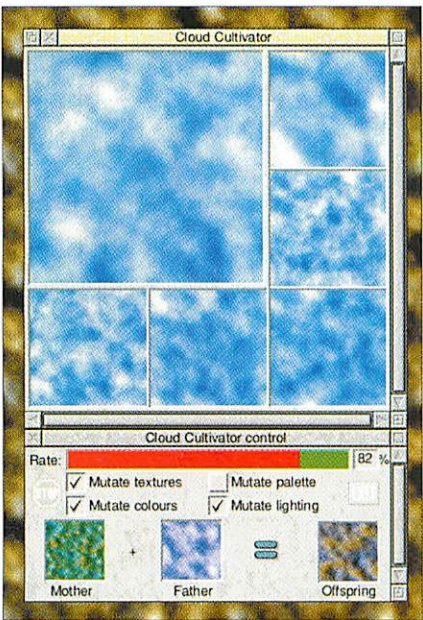
also be used to generate animations, which may be saved as directories of sprites, multiple image sprite files or animated GIFs, using the InterGIF interface.

Run the application and drag a few text files from inside the "Textures" directory into its main window. Placing a cloud texture into the larger area in the main window and double clicking will produce a number of mutations of the image.

Any of these can be dragged back and mutated again.

Opening the tool window fully reveals a '+' and an '=', dragging textures into the two boxes either side of the plus and clicking the equals will combine the textures into a new one. This happens randomly, so further clicks will produce different effects.

The program supports full interactive help and for more detailed information on how to use the program you should refer to this.



Ellipse service

Author: Scott Boham

Scott Boham (who we insist on calling Scott Bonham sometimes) is the regular behind this traditional eye-strainer.

The idea is simple – Basic's exotic ELLIPSE FILL command (one of the most underused in my humble opinion) is used to plot a series of not-quite-circles in repeating bands of sixteen

colours. These are then cycled in time honoured tradition and the effect is probably not to be recommended if you value your eyesight.

Of course, the true test of this sort of doodle is to see if the desktop appears to be moving about after you've finished looking at the thing. Rest assured, it does.



IFS and buts

Author: Jan Vlietinck



Well, no buts about this item really. It's a beautifully animated bit of fractal fun from our man **Jan Vlietinck**. IFS stands for *Iterated Function System* and is a simple way of defining a wide range of different iterative designs – dragon curves, gaskets, ferns – all sorts really.

Our last venture into the world of IFS was actually way back in September 1994 when we carried Richard Seago's fast demo. Jan's IFS demo adds a new twist by

'in-betweening'. The IFS designs are defined by a few transformations which are applied recursively. These are stored in DATA statements within the program.

Jan's prog works out the next design and then performs a smooth animation from the current one to the new.

Obviously, some fast code is used to do the business and this is a hallmark of Jan's programming.

Yet another VAT Return!

We can't guarantee that your paperwork will decrease, but we can assure you that you will spend far less time looking in old ledgers!

Your accounts may even become enjoyable with **Prophet 3**, the award winning business accounting application from Apricote Studios.

From simple book-keeping to invoicing, stock control, VAT and final accounts, **Prophet 3** does it.

Whether you are doing your accounts by hand or with a spreadsheet, database and DTP software, changing to **Prophet 3** will make the whole job that much simpler - no more manual adding up, entering formulas, incrementing invoice numbers etc., just open the relevant ledger and type in your data - everything else is automatically done for you.

It is no wonder that we have won the **Acorn User Best Business Software Award** two years running.

Why not give **Prophet 3** a test drive today - telephone or fax us on **01354 680432** or visit our WWW site: <http://homepages.enterprise.net/apricote> and ask for our free brochure and demonstration disc.



APRICOTE Studios
2 Purls Bridge Farm • Manea • Cambs • PE15 0ND

Tree-mendous

Author: Philip Mellor

Well, come on – we've had so many tree-like things in *info over the years we're running out of puns. This particularly piece of forestry comes from 16-year-old **Philip Mellor** of Leeds and is of the magic variety.

When run, you will be asked to supply a few numbers to specify the nature of your tree – number and angles of splits and so on.



Defaults are provided if you are lazy, and we strongly recommend that you do not cycle the colours while plotting as this will take an age.

When done, the palette is cycled to produce a dramatic effect, not dissimilar to that produced by lightning.

Not that we recommend standing that close to trees during thunderstorms.

Cold coffee

Author: Clem Edmond

...is the rather melancholy title of the latest *Digital Symphony* offering from regular **Clem Edmond**. We were unsure as to whether this was in any way inspired by the classic 8-bit BBC tune *ColdTea* (sometimes known as *ClodEat*), but seeing as it sounds more like the closing titles of a late '80s sci-fi/horror film we decided that the similarity of names was purely co-incidental.

Ripple time

Author: Philip Mellor

Not one but two Basic sprite mapping demos now from **Philip Mellor**. (I'm sure I've heard that name before somewhere.) They show just what can be done with a little bit of thought and a graphics window.

Both programs look for a sprite file to mutate. You will find one in the directory – click on !SetCSD so that the demos will find it.

The sprites are distorted using the VDU 24 command. By creating lots of graphics

windows – one for each line of pixels – each row can

be plotted at different positions (such as along a sine wave) or in different sizes.

In *Perspective* each row of pixels is scaled to plot the sprite in perspective – use the



mouse to move the sprite around the screen. Change

the value *st* in the second line to 8 or 12 if you're using an ARM250 or ARM2.

Ripple ripples the sprite as if it's under water. Moving the mouse horizontally changes the amplitude of the sine wave; moving it vertically alters the wavelength. Try a small amplitude and a large wavelength, or vice versa. Again, change the value of *st* in the second line to 8 if you're using an ARM2 or possibly an ARM250.'



SWI not

Author: Jonathan Rawle

If you tried **Jonathan Rawle's** *SWIconv* program on the February disc you may have noticed that the version published was in fact garbage. Due to a small hole on a hard disc, the program became mangled. Apologies to Jonathan and all those who were disappointed, and thanks to those who pointed the error out. We'll try again this month...

Keep 'em up

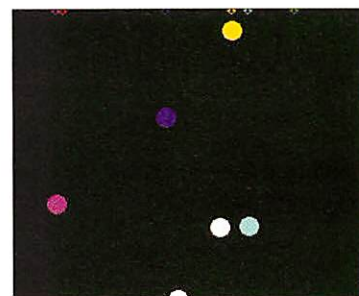
Author: Philip Mellor

We continue with a medley of items from **Philip Mellor** with this little juggling game called, let me think, oh yes – *Juggler*. We both played this game while on the phone to one another and can reveal that while one of us managed an excellent score, the other was absolutely abysmal at it. (I reckon DL's ability to juggle in real life gave him an unfair advantage.)

The aim is to keep as many of the balls in the air as possible by bouncing them off the

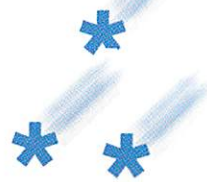
white ball, which you can control using the mouse. Note that vertical movement is restricted.

The game is over if you have less than two balls left in the air. The current score is shown in the bottom left hand corner of the screen – you score one point every time you bounce a ball. A new game can be started at any time by clicking Select. The highlights on the balls can be toggled on and off by clicking Adjust.'



If the map fits, apply it

Author: Mark Hollis

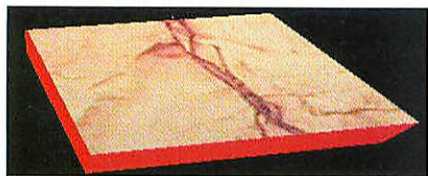


Another venture into the realms of texture mapping now. Mark Hollis is the creator of these two demos – a Basic version which should be an invaluable example of what the process involves, and a fast machine-code translation. The author explains the ins and outs of mapping...

'Texture mapping is the process by which pictures or sprites are mapped onto the surfaces of 3D objects. This gives a greater sense of realism in games that use polygon graphics, such as *Ridge Racer* on the Sony Playstation.

'First it is necessary to design a model describing a simple situation. In this model the viewpoint is at the origin, and the screen is in a plane parallel to the xy plane and distance *viewdist* from the viewpoint. The texture sprite is in a plane described by a two-stage transformation. This takes a sprite from its initial to final position with a rotation and translation.

'Initially the texture sprite is in the xy plane



with its centre at (0,0,0). This texture plane is then rotated about the z, y, and x axes in sequence by the angles *zrot*, *yrot*, and *xrot* respectively.

'This is achieved by rotating the unit vectors *i*, *j*, and *k*. Vector *i* represents one unit along the x-axis and has components (1,0,0), vector *j* represents one unit along the y-axis and has components (0,1,0), and vector *k* represents one unit along the z-axis and has components (0,0,1).

'For example, to rotate the plane 30 degrees about the z-axis, would give vector *i* components of (0.866, 0.5, 0), vector *j* components of (-0.5, 0.866, 0), and vector *k* components of (0,0,1).

'Finally the texture plane is moved so its centre is at (*xdist*, *ydist*, *zdist*). You now have a

model for any situation.

'Consider a ray of light which travels to the view point (0,0,0) through the pixel at (*xx*, *yy*, *viewdist*) in the screen plane and intersects the texture plane at (*x*, *y*, *z*).

'To simplify the maths, the complete model needs to be re-orientated so the texture plane is parallel to the xy plane. This is achieved by rotating everything about the viewpoint. So to discover which pixel in the texture sprite is mapped to the pixel in the screen plane, you just need to find its x and y co-ordinates relative to the centre of the texture plane.

'Two vectors are used to represent points in the texture and screen planes after re-orientation. Vector *v* represents the centre of the texture plane and has components *xv*, *yv*, and *zv*.

```
xv = zdist * zi + ydist * yi + xdist * xi
yv = zdist * zj + ydist * yj + xdist * xj
zv = zdist * zk + ydist * yk + xdist * xk
```

'Vector *s* represents the pixel in the screen plane and has components *xs*, *ys*, and *zs*.

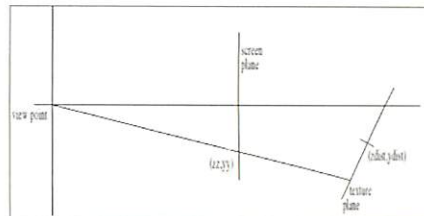
```
xs = viewdist * zi + yy * yi + xx * xi
ys = viewdist * zj + yy * yj + xx * xj
zs = viewdist * zk + yy * yk + xx * xk
```

'Figures I and II illustrate the position of the planes before and after re-orientation. From Figure II it can be seen that the large triangle constructed from the dashed line and the smaller shaded triangle are similar triangles.

'Therefore $y/zv = ys/zs$, so $y = zv * ys / zs$. This gives the co-ordinate relative to the viewpoint. To make it relative to the centre of the texture plane subtract *yv*. The x co-ordinate is calculated in the same way.

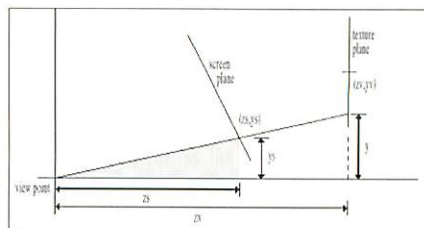
'I have written two programs to demonstrate texture mapping to you. The first is written in BASIC and this scans the rectangular area a texture appears in on the screen pixel by pixel, so you can study the process. Each pro-

gram works exclusively in mode 15 and draws a three-dimensional slab onto which a 256 x 256 pixel sprite is mapped. The position of the slab is specified by the variables *xdist*, *ydist*, and *zdist*, and the orientation by the variables



xrot, *yrot*, and *zrot*. The variable *viewdist* gives the distance from the view point to the screen.

'The second program performs texture mapping in real-time and contains significant chunks re-written in ARM. This displays an identical slab and rotates it in the texture



plane. The variable *zstep* is currently set at four degrees and can be decreased to one degree, so it runs smoother on faster machines.

Performance starts at two frames per second on a machine with an 8MHz ARM2 processor and increases to 20 frames per second on a machine with a 40MHz ARM710 and VRAM. It is interesting to know that the VRAM alone virtually doubles the performance of a machine in mode 15, irrespective of the processor.'

*QUIT

All submissions, not-too-large or small-as-you-like to our usual haunt:

*INFO, Acorn User, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP

or, if your submission is about **100K or less**, e-mail us (including your real address please) at: austarinfo@idg.co.uk

You needn't include a letter but **please put your name, address and program title on every disc** and include a text file containing your name, address, disc contents and program details. An SAE will ensure your discs are returned. *info submissions only please.

Compatibility table

Program	RISC OS 2	RISC OS 3.1	RISC OS 3.5+
IFS Morph	No	Yes	Yes
!CloudCult	No	Yes	Yes
!SWIconv	No	Yes	Yes
Chimes	No	Yes	Yes
Juggler	No	Yes	Yes
MagicTree	Yes	Yes	Yes
Perspectiv	No	Yes	Yes
Ripple	No	Yes	Yes
!lcoConv	No	Yes	Yes
Textwe	Yes	Yes	Yes
On/Off	Yes	Yes	Yes
Spiral	No	Yes	Yes
Zinter	Yes	Yes	Yes

SOFTWARE SHOWCASE

GAMES

14 DAY HOME TRIAL

What we will do is send you our latest five quality budget games for you to try in the comfort of your own home.

Any Risc OS including StrongARM

GENERATION DESIGN
2 Whitecliff Gardens, Blandford
Forum, Dorset DT11 7BU
Tel: 01258 452507
Email: genden@argonet.co.uk



FIVE STAR MARKETING

OUTSTANDING HIGH QUALITY PUBLIC DOMAIN SOFTWARE

EXCELLENT PACK OFFERS

Games 1 : Games 2 : Games 3 : Games 4 : Draw Clipart 1
Draw Clipart 2 : Draw Clipart 3 : Draw Clipart 4 : *NEW*
Draw Clipart 5 : Educational 1 : *NEW* Educational 2
Utils 1 : Utils 2 : Utils 3 : *NEW* Utils 4 : Sound1 : Sound2

Each pack has three fully archived discs. One pack for £3.75 -
Two packs for £7.20 - Three packs or more at £3.50 for each pack.

We are distributors of educational software from Sherston and 10 out of 10. We offer at least 10% saving on their recommended prices. Official orders are welcome. For free educational catalogues and further information write to the address below or call 0181 950 4973.

Five Star Marketing, 4 Shepherds Walk
Bushey, Herts. WD2 1LZ.

Our *NEW* demo/catalogue disc for just £1 or buy any pack and get our demo disc free. Sorry, no credit card facilities available.

BUREAU

PRINTMAKER

<http://printmaker.co.uk>

ACORN FRIENDLY SCREEN PRINTER & VINYL GRAPHICS BUREAU

printmaker@argonet.co.uk
0118 956 7947



EDUCATION

Level 4 Network?

RoomJ@aol.com Admin 01736 762541

Network Management made easy!

Simple user creation, instant password lookup
Israp clearer, wildcard search for passwords/editing
cramped with essential manager's aids - £50

Printlimit

Effective network printing control - limits copies allowed
includes password override - S.L. £20

Room J Software

E-mail or 'phone for files
Appletree Cottage, Lwr Polladras, Breage, HELSTON TR13 9NX
Acorn software and utilities prepared to specification.
Network problems solved and on-site tuneups
Contact for details of our extremely modest rates

BUSINESS SOFTWARE

DSL SUPPLIES

Squirrel StrongARM upgrade
£32.50
inc. P&P

ST MARGARET'S LANE
FAREHAM
HANTS PO14 4BQ
TEL/FAX 01329 841600



NETWORKING



Report

A sophisticated software solution which allows the teacher to compile reports for groups of pupils.

£59.99 (single user)

Network + Pupils + Printer = Waste paper!

Solve this equation with 'Quota'
The paper saving printer management software for AUN networks *

Only £49.99

* Requires Level 4 fileserver and Spooler

ROOM 20 SOFTWARE

47 Henry Street, Grassmoor, Chesterfield, Derbyshire, S42 5AT
Tel: 01246 856684

ARE YOU AN ACORN DEALER?

To advertise in this space please contact
Ian Antrobus on 01625 859555

ACORN SOUTHEAST SHOW

Supported by Xemplar

Sponsored by The ARM Club

and Acorn Computers Ltd

SATURDAY 5TH JULY 1997

The Collingwood Suite
Stanborough Road
Welwyn Garden City
Herts

Doors open from 10am until 5pm

Admission: Adults £1.50 / ARM Club member £1.00
Children under 16 FREE (accompanied by an adult)
(Refreshments available)

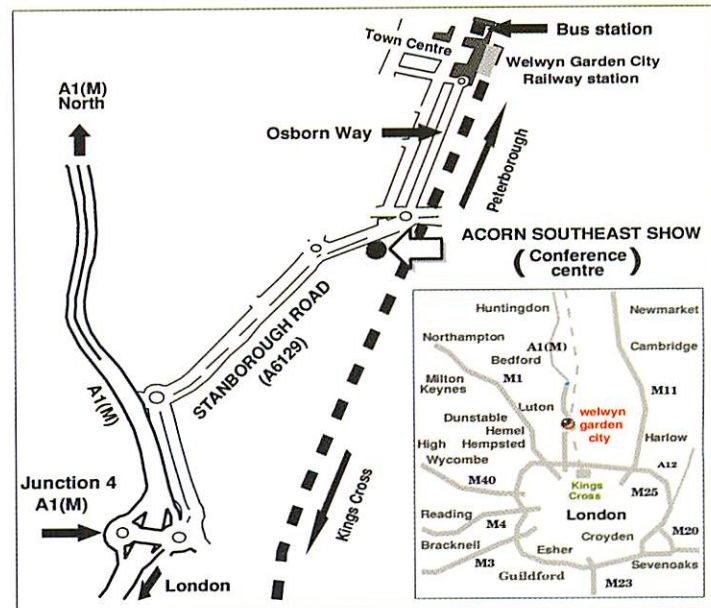
- » Latest products
- » Special show discounts
- » Revelation demo party
- » PD/Clipart CDs to be won!
- » Network of NCs
- » Demo your programs
- » Meet fellow enthusiasts

Phone: (01582) 767540
BBS: (01707) 323531 / 24 hours
Email: acornshow@digibank.demon.co.uk

<http://www.digibank.demon.co.uk>

EXHIBITORS

- | | | |
|---------------|----------------------|-------------|
| Acorn | Dorling Kindersley | Argonet/VTI |
| Xemplar | Creative Curriculum | RaspSoft |
| The ARM Club | Archimedes World | CTA Direct |
| Atomwide Ltd | Akalat Publishing | CJE Micros |
| Spacotech Ltd | Pineapple Software | Beebug |
| Acorn User | Oregon Developments | Yellowstone |
| APDL | Camb. Software House | R Comp |
| iSV Products | Really Good Software | Bajorasoft |
| Logotron | Carlton Software | |



BACK issues

Missed out on one of our previous issues? Now's your opportunity to bring your collection up to date. But hurry: stocks are limited



Issue 182-June 1997

- Digital Cameras
- ARMSwitcher
- Game Creation
- Apocalypse on disc

Issue 181-May 1997

- Politics & I.T.
- Real programming
- Acorn User survey
- Quick time VR



Issue 180 - April 1997

- Creating your own 3D games
- The new Zip drives
- Public Domain software CDs
- C++ books reviewed

Issue 172 - September 1996

- Ovation Pro ● Printer survey results ● Acorn in Holland
- Images in HTML ● Customising your desktop

Issue 173 - October 1996

- Top-level Acorn interviews
- NChannel & the NetStation
- Presentation software ● Highlighter package ● Save the Gweeks

Issue 174 - November 1996

- StrongArm ● Hi-res online video editing ● MIDI explained and explored ● Rainbow CD from RESOURCE ● Inferno

Issue 175 - December 1996

- TopModel ● ActiveX and the NetStation ● Fitting the StrongARM
- Creating images for the Web ● Shanghai and Shogi

Issue 176 - Christmas 1996

- AU awards
- StrongARM compatibility table
- SCSI vs IDE
- Nstore for the pocketbook

Issue 177 - January 1997

- Acorn in New Zealand
- Risc TV ● New Psions
- HTML creation tools
- Bett'97 Show

Issue 178 - February 1997

- Acorn Internet Relay
- Spreadsheets compared
- Upgrading to Hard Drive or CD
- Acorn Portables

Issue 179 - March 1997

- Flatbed scanners reviewed
- Oregon's SoundStudio
- Control your business payroll
- HTML oddments examined

Order form

- ☐ Issue 172, September 1996£3.25
- ☐ Issue 173, October 1996£3.75
- ☐ Issue 174, November 1996£3.25
- ☐ Issue 175, December 1996£3.75
- ☐ Issue 176, Christmas 1996£3.25
- ☐ Issue 177, January 1997£3.75
- ☐ Issue 178, February 1997£3.75
- ☐ Issue 179, March 1997£3.75
- ☐ Issue 180, April 1997£3.75
- ☐ Issue 181, May 1997£3.75
- ☐ Issue 182, June 1997£3.75

Name

Address.....

.....

.....

.....Tel No.....

.....

Please allow 14 days for delivery. Send cheques payable to IDG Media to: Acorn User Back Issues, Database Direct, FREEPOST, South Wirral L65 3EB or phone 0151 357 1275 Fax: 0151 357 2813 E-mail: database@dbdirect.demon.co.uk

☐ Please tick if you do NOT wish to receive further information or special offers

**Free ads
are on
this
month's
cover
disc**

Acorn User Free Ads Service

Why not take advantage of our free reader ad service? Fill in your details on this coupon (25 words maximum, one word per box below) and send it to Free Ads, Acorn User, IDG Media Ltd, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to: aufreeads@idg.co.uk. Only one ad per reader, please. Although we try to publish every ad we receive, we can make no guarantees; publication is entirely dependent on space and time constraints. We may also publish free ads on the cover disc if magazine space is short. Please fill in your name and telephone number below: these will not be published, but they enable us to contact you in case of any queries.

Your name: Telephone no:

Frequency in the balance

Mike Cook re-uses some hardware for easy application

Completing the theme of computer-controlled audio devices, this month I would like to look at building a graphics equaliser. While to some youngsters an equaliser might conjure images of a gun-toting avenger, this project is really about a super tone control.

In the beginning was a single control called *tone*. When I was young I often thought its sole purpose was to make the sound worse because set anywhere other than at one end the sound turned mushy. Then as hi-fi emerged you got two controls – bass and treble; one allowed you to control the top frequencies and the other the bottom ones. Finally the rotary controls gave way to sliders and an extra mid-range tone control was introduced.

The tops of the sliders on these three controls could be thought to resemble a graph of the frequency response you were producing and thus the Graphics Equaliser was born. Nothing to do with graphics but a series of controls that graphically show the frequency response forced on a circuit. The idea is that you can compensate for room acoustics or speaker response by cutting and boosting certain frequency bands.

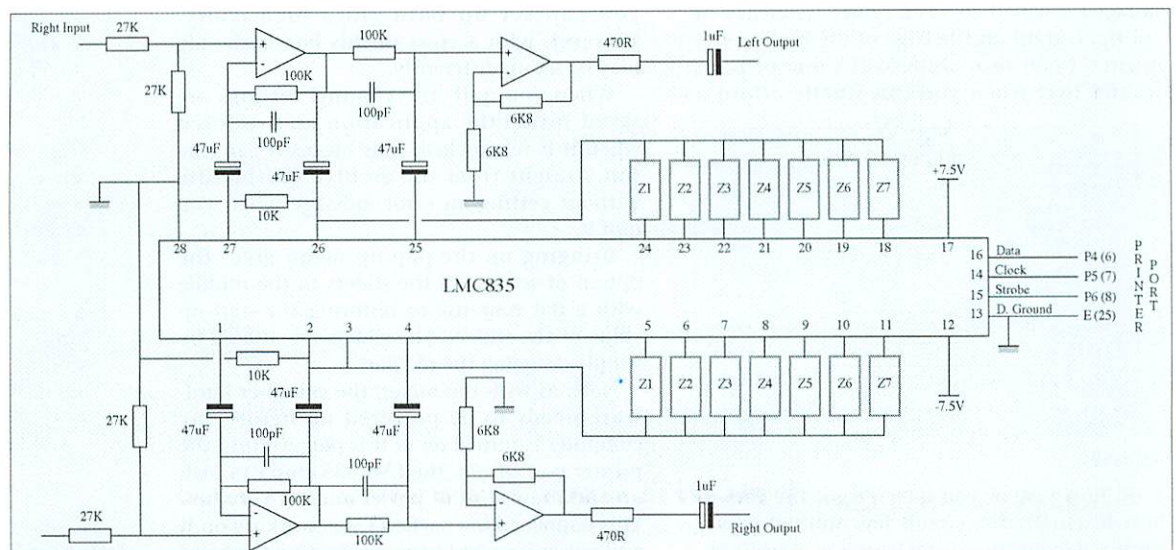
This design is for a seven-channel stereo graphics equaliser and uses the LMC835 chip I first used in the April 97 issue of *Acorn User* as an audio mixer. The chip can be used for a 12-channel mono equaliser but in most cases seven channels is adequate.

Basically what we do is break each channel up into a number of overlapping frequency

bands and then mix them back together with a different gain for each band. It's this mixing function that's performed by the LMC835 chip and we have to make the band filters and attach them to the chip.

The full circuit diagram of this is shown in Figure 1 and as you can see it's a fairly symmetrical circuit between left and right channels. The LMC835 needs to be fed with ± 7.5 volts and that can be used for the op-amps as well.

Figure 1: The full circuit diagram



bands, to get the maximum dynamic range out of the amplifiers these need to be powered with ± 15 volts.

This is because the LM833 amplifier, while being of good low noise audio quality, can't drive its output to more than a few volts of the power rail. In practice I used the same voltage for all the parts and it did work fine. The computer interface side uses three signals – clock, data and strobe – connected to the printer port. Instead of the usual pin assignments of bits 0, 1, and 2, I have used bits 4, 5, and 6, so you can use this project along with the

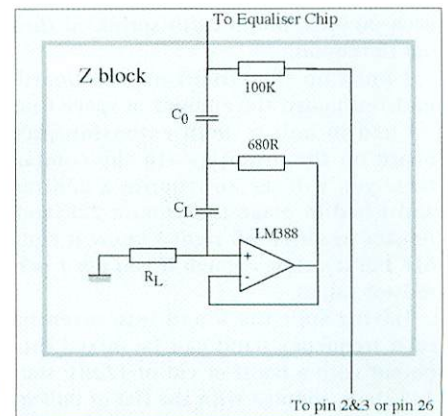


Figure 2

Mike Cook's hardware series

mixer on the same printer port without changing the software.

Unfortunately the entire circuit is not quite as simple as Figure I would suggest, as the filtering part has been simplified to a single dotted box labelled Z1 to Z7. Each of these boxes needs to be replaced by the circuit of a filter – shown in Figure II. You can see it is quite simple but we need to make 14 of them which bumps up the complexity somewhat. Figure III shows the pin out of the LM833 operational amplifier – you can see that two filters can be made from each chip. I chose to make the left and right filters using the same chip but any other arrangement is possible.

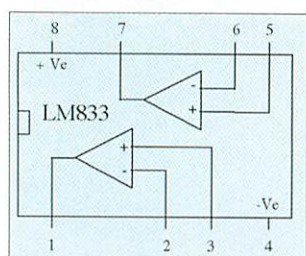


Figure III

The only difference between the filters is the value of three components. You will have to cross reference the values in the table with the filter band to get the correct component values. The bands covered are right across the audio spectrum – in fact Z7, which covers a centre frequency of 16KHz, is right on the edge of the highest frequency I can hear. Indeed it's one of life's ironies that when you can finally afford a

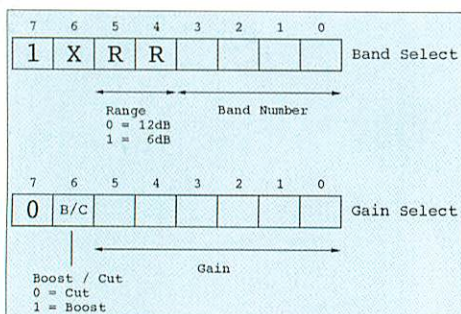


Figure IV

good hi-fi system you haven't got the ears to hear it. Finally the circuit has omitted power supply decoupling capacitors for simplicity. You should have about four of these between each power rail and earth sprinkled throughout the circuit.

I built up the circuit on veroboard and underestimated the amount of space I needed – I had to bolt a small extension piece of board on the prototype. In the component table you will see Z6 requires a 62K resistor and I had to make this from a 22K and 39K resistor in series. All right I know it comes to 61K but it's close enough if you use 1 per cent resistor values.

Having split the sound into seven bands, each frequency band can be mixed into the output with a boost or cut of 12dBs, stable in 1dB steps, coupled with the flat or 0dB setting and you get 25 different settings for each channel. The way the computer controls the

chip is shown in Figure IV. First you clock in the channel – select value 1 to 14 – and then that channel's gain. The gain value is not straightforward binary but a strange mixture of bits set and clear. Therefore an array must be used as a look-up code converter to get the correct value – fortunately we can leave this to the software.

On the disc is the software to control this called *Equaliser*. I know it's a dull title but it does describe its function. It was based on the mixer software of a few months back but it did need quite a bit of modification. There is a slider for each channel for each side of the stereo system. The only other control is the box marked *locked*. When this is ticked sliding one channel on left or right side moves the same channel on the other side. In that way you can set up both sides identically. However, with a cross in this box each side may be set up differently.

When you quit, the channel settings are saved inside the application and restored when it is relaunched. This means it can't be run straight from the archive on the disc without getting an error message when you quit it.

Bringing up the pop-up menu gives the option of setting all the sliders to the middle with a flat response or restoring the start-up value of the sliders. The sliders are altered by simply dragging the red part.

Note, as with the mixer, the equaliser hardware needs to be powered up before the computer is turned on or it is plugged into the printer port. If not, the LMC835 chip can lock up and draw a lot of power and get very hot. This happened once when I was working on it and got quite a bad burn on my finger when I tested how hot it had got – however the silicon survived.

You can then plot the audio response of the circuit with last month's frequency plotter but note that the top range of that project was 8KHz so you won't be able to see any effect the top filter makes.

Anyway that about wraps it up for this month. Next time we will leave audio circuitry and look at something completely different.

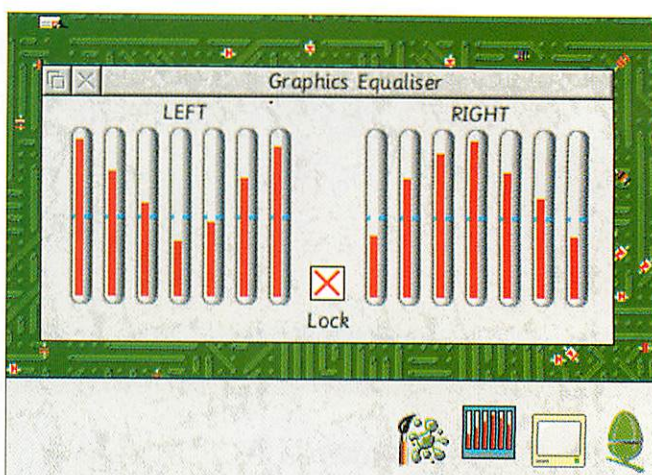


Table I: The filter component values

Filter	F_0 (Hz)	C_L	C_L	R_L
Z1	63	1uF	0.1uF	100K
Z2	160	0.47uF	33nF	100K
Z3	400	0.15uF	15nF	100K
Z4	1K	0.068uF	6n8	82K
Z5	2.5K	0.022uF	3n3	82K
Z6	6.3K	0.01uF	1n5	62K
Z7	16K	4n7	680pF	47K

NOTTINGHAMSHIRE

Arnold Computer Supplies.
Home enquiries welcome.
Repairs & Service. Tel: 0115
9264973

ESSEX - GeneSys for all your
Acorn needs, serving Education,
Business & Home. Contact
Richard Brown 01702 462385. E-
mail: genesys@argonet.co.uk

HIGHLANDS

Wardlaw
Surveys, Authorised Acorn
Dealer, for all your needs from
supply, service, repair & full after
sales. Tel/Fax: 01463 831214

GLASGOW

Todd
Education Supplies, covers the
central Scotland area. Welcomes
educational & private enquiries.
Tel: 0141 644 4952

ACORN USER

ADVERTISERS INDEX

1st Computer Centre	32	ISV Products	18
5 Star Marketing	71	Liquid Silicon	31
A P D L	51	Mauden Sales	75
ACE	35	Micro Laser Design	48
Arnold Comp Supplies	75	Oregon Developments	52
Atomwide Ltd	OBC	Pineapple Software	IBC
Beebug	IFC, 9	Printmaker	71
Calancraft	75	R. Comp Interactive	46
C.S.S.	75	Room J Software	71
Castle Technology	12, 43	Room 20	71
CJE Micros	22	Serious Statistical S/ware	55
CTA	28	Sibelius Software	25
Daco Systems	75	Simtec	56
Dalriada Data	46	Softase Ltd	55
Davyn Computer Services	20, 75	Spacetechn	43
DSL Supplies	71	Technology Matrix	31
Eesox	51	The Datastore	52
Electronic Font Foundry	61	Todd Education Supp	75
Generation Design	71	Wardlaw Surveys	75
GeneSys	75	Werewolf	52
Ian Copestake	7	Yellowstone Educ. Software	55
IFEL	39	Zenta	51
Irlam Instruments	11		

ARE YOU AN ACORN DEALER?

To advertise in this space please contact
Ian Antrobus on 01625 859555

CUMBRIA



Cumbria Software Systems

Specialist Acorn Dealer

Risc PC700, A7000

Sales, Repairs, Software, Peripherals

Network design and installation

Ethernet, Nexus ATM, Multi-platform networks

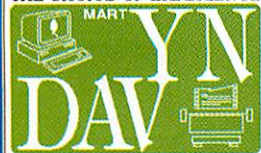
Semerc Authorised Dealer

CSS Ltd., Unit 3A, Townfoot Industrial Estate
Brampton, Cumbria, CA8 1SW

Tel: 016977 3779

WEST YORKSHIRE

THE CHOICE OF EXPERIENCE



Dayn Computer Services

Printers, Ribbons, Ink Cartridges,

Refills

Expert Advice & After Sales Service

Mail Order Master Card, Visa, Switch

Ring for Prices

Service & Repair to all Equipment

Full Range of Acorn Hardware & Software

(We operate the Acorn Finance Schemes)

Full Range of Educational Software

Tel: 01924 254800 Fax: 01924 258036

e-mail sales@dayn.demon.co.uk

Acorn RISC PC hp HEWLETT

Pocket Book II RISC PC hp HEWLETT

For the best service in Yorkshire
(we think)

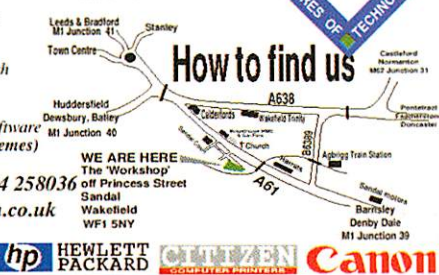
CALL US! for A7000, RiscPC & Pocket Book II
Visit our Showroom

Open 9.30 to 5.30

Mon, Tues, Weds, Sat.

9.30 to 7.30

Thurs & Fri.



WE ARE HERE
The 'Workshop'
off Princess Street
Sandal
Wakefield
WF1 5NY

Acorn RISC PC hp HEWLETT

Pocket Book II RISC PC hp HEWLETT

MIDLANDS AND OXFORD

DACO

459-465 Warwick Road, Tyseley, Birmingham B11 2JP

XEMPLAR EDUCATION AGENT

Tel: 0121 706 8933 Fax: 0121 706 4306

- Home use
- Business
- Education
- Special Needs
- Software Training
- Acorn approved network installers
- Complete range of Acorn equipment
- Consultancy



For expert advice
& friendly service
come and see us.
We are open
Monday - Friday
9.00am - 5.30pm

WEST MIDLANDS



MAUDENS

Established 1980

"Millside", 133 High Street,
Wollaston, Stourbridge,
West Midlands, DY8 4NZ.



- Full Acorn Authorised Service Centre
- Authorised Microsoft re-seller
- PC Developers and Category 5 Networking Specialists
- New Showrooms with complete range of Acorn machines
- MAIL ORDER - It is our policy to match most prices on offer
- Come to our showrooms and view the Internet

0% Finance on PC and Acorn Machines

With 16 years of service you can't go wrong with Maudens

Tel: (01384) 444433 / 833300. Fax: (01384) 441655

SURREY



Calancraft Ltd.



THE COMPLETE ACORN DEALER

- Showroom open 9.00 - 5.30 six days and to 8.00 on Thursday.
- Acorn range on display, and full demonstrations given.
- Lots of programs, games and education software for you to try.
- Full service and repair facilities.
- Network Dealer and Training Centre for Education and Home.
- Printers, Upgrades, Internet, CD ROM, etc. etc.

"Very helpful people"

with a 13 year long reputation for exceptional service and support.



Easy parking.

96 High Road, Byfleet,
Surrey KT14 7QT



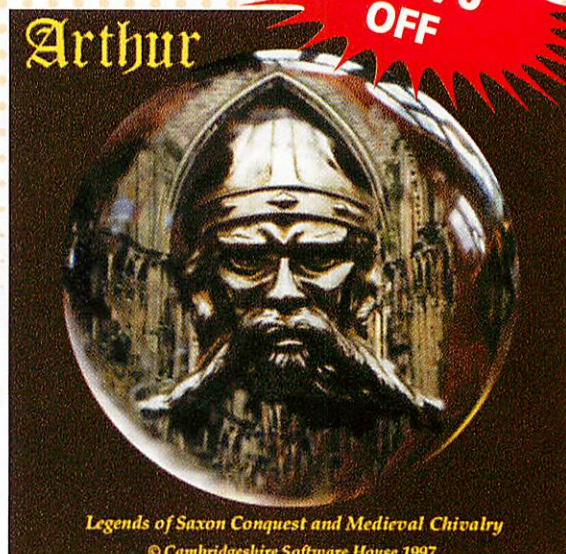
Tel: (01932) 342137

Fax: (01932) 336435

ACORN USER

Brings you an amazing reader offer from Cambridgeshire Software House

Save £20



For just £30+VAT you can re-live the world of Excalibur with your own copy of:

King Arthur: Legends of Saxon Conquest and Medieval Chivalry



Select your quest and journey through the medieval settings of Arthur's kingdom solving problems, facing new challenges and meeting all manner of colourful characters.

Explore the fascinating world of mythology, literature, history and legend. The CD-ROM gives you access to maps, movie clips and photographs including information and images of artefacts and heraldry, the Magna Carta and Celtic names.

King Arthur is a fascinating program, rich in detail and imagery that children can come back to again and again.

*Reviewed on Page 49
of this issue of Acorn User*

Yes! I would like to receive King Arthur: Legends of Saxon Conquest and Medieval Chivalry for the incredible price, including VAT, of £35.25.

Name
Address
.....
Postcode
Tel.

I would like to pay by:

☐ Cheque ☐ Postal order (Payable to CSH)

☐ Credit card (Visa / Access / Barclaycard / Mastercard)

Card Number:

Expiry Date: /

Please tick if you do not wish to receive promotional information from other companies ☐

Send your completed form and payment to: King Arthur Offer, Acorn User, IDG Media, Media House, Adlington Park, Macclesfield Cheshire, SK10 4NP



Steve Mumford takes a look at plotting sprites within windows

Now that we've covered the mechanics behind plotting a sprite on the screen using the various system calls available to us, it's just a small jump to extend the principles one step more and include their use within a multi-tasking application.

Being able to paint directly onto the screen in this way adds much more flexibility to any program you might care to write as you can dispense with the limitation of having to create your entire user interface using buttons and icons.

When the user creates a window, either through a template editor or directly using **Wimp_CreateWindow**, a bit within the definition is set to indicate whether the WIMP is capable of redrawing the window by itself – that's possible as long as it doesn't contain anything other than the standard buttons and icons.

In order to be able to include user graphics within our windows, we have to unset this bit – the WIMP will then prompt us whenever the window in question needs redrawing. Consequentially, another chunk of housekeeping code is required, and this is described below.

Whether the target window has just been opened or uncovered, or the user has made some change that necessitates the screen to be redrawn, the application is informed of this in the same manner.

A **Wimp_Poll** event with a reason code of 1 is generated (**Redraw_Window**

_Request), and this is passed to your application along with a pre-prepared data block.

It's formatted to be compatible with the **Wimp_RedrawWindow** SWI call, so as soon as you receive the redraw request you should call **Wimp_RedrawWindow** and immediately update the window before the program continues. Place the pointer to the data block returned by the polling loop in register 1 and call the SWI as follows:

```
_kernel_swi_regs in, out;
int redraw_flag;
in.r[1] = (int) pollblock;
_kernel_swi(Wimp_RedrawWindow, &in,
&out);
redraw_flag = out.r[0];
```

At this stage, the WIMP will have calculated the area of the window that needs updating, and broken it down into a series of rectangles. The program can then interrogate the WIMP and discover these in sequence by entering a short *while* loop.

```
while (redraw_flag) {
/* Redraw window using given coordinates */
in.r[1] = (int) pollblock;
/* Get next rectangle to redraw */
_kernel_swi(Wimp_GetRectangle, &in,
&out);
redraw_flag = out.r[0];
}
```

Every time **Wimp_GetRectangle** is called, a new set of coordinates are supplied in the data block, allowing the invalid area of the window to be determined and redrawn.

The graphics clipping window is automatically set to bound the appropriate area, so you can ignore all the numbers and

simply redraw the whole window every time, not worrying whether you're plotting sprites that overlap the visible edges of the window. However, this is obviously not very economical and for graphics-intensive systems, it's better to undertake the task in a more intelligent fashion and only redraw the sections of the screen that you have to. Once the task has been completed, **Wimp_GetRectangle** will return a zero flag and the main body of the program will be able to continue.

At this point it's appropriate to say something about the coordinate system to describe the position of windows as well as the relative positions of their contents. In the past, x and y coordinates have been sufficient at describing graphics on screen; when specifying window position, several more are needed.

Firstly, the corners of the window are specified by measuring x and y distances from the bottom left corner of the screen, giving minimum and maximum values for both x and y.

Conceptually, windows are holes that look onto much larger documents beneath, only showing one small area at a time; to describe this, we need to specify the top left hand corner of the larger document as it would appear on the screen, and the size of the offset between the top left hand corners of the virtual document and the actual window through which we view it.

In order to plot a sprite to the window so it arrives in the right location, we need to convert between coordinates relative to the top left corner of the window's work area (the virtual document described above) and actual on-screen coordinates.

I'll cover this in greater detail next time, the demonstration application on next month's disc shows you how to go about it.

AU

Amazing free gifts and special offers!!!
Over £100 worth of magazines
and software for just £39.99

ACORN USER

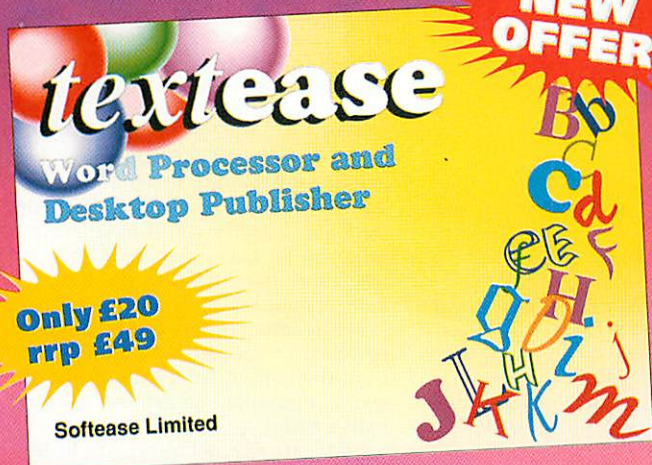
the world's number 1 Acorn magazine

You already know what a great magazine ACORN USER is. It is the only Acorn magazine with up-to-the-minute Acorn news, in-depth hardware and software reviews, and without doubt the best cover discs available.

What you might not know is that by taking out a subscription today, not only are you guaranteed never to miss an issue of the biggest and best Acorn magazine in the world, but you can also claim an excellent free gift or special offer, available exclusively to all new ACORN USER subscribers.

*All our software offers are StrongARM compatible.

TEXTEASE



The most flexible, straightforward and comprehensive wordprocessor and desktop publisher ever. Use it to make letters, invitations, cards, banners, notices, posters, overhead foils, in fact any kind of text and graphics. It is designed to be ideal for children and is invaluable for older children and adults.

CURRENT SUBSCRIBERS

– you can take advantage of these offers by renewing your subscription at any time

RHAPSODY

FREE

SOLD OUT

Your chance to compose your own musical score. Rhapsody allows you to modify and manipulate music as a wordprocessor does text. You can enter score by hand, note by note, or, if a MIDI Interface is fitted to your computer, you can play a tune using a MIDI keyboard and capture the music in Rhapsody. The music can then be transcribed ready for editing, replaying, etc.

In the shops £59.99 as an Acorn User subscriber you can claim it for **free!**

SUBSCRIBING HAS NEVER BEEN EASIER



Why not make your subscription even easier and subscribe by direct debit, spreading the cost of your subscription over quarterly hassle-free payments. What's more, you need never worry about missing an issue again, as the subscription continues until you decide to cancel.

CRYSTAL MAZE



FREE

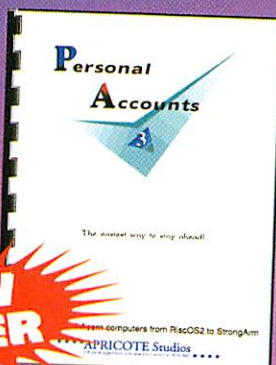
New offer
rrp £16.95

Pit your wits against TV's most famous maze! Discover the secrets of the maze as you take up the challenges of the Aztec, Medieval, Futuristic and Ocean zones. Solve the ingenious games and fiendish puzzles to win precious seconds in the ultimate challenge - the Crystal Dome.

PERSONAL ACCOUNTS 3

Just £10
rrp £49.95

The most popular home and club accounts package. Multiple accounts, standing orders and forecasting are just some of its features. We gave it top marks in the Jan '95 issue. See the demo on the AU CD-ROM 2.

NEW
OFFER

HIGH RISC RACING

PLUS A £5 OFF VOUCHER FOR
LAST OFFENCE

Fast, furious and fatal, the ultimate racing game. You'll need nerves of steel and lightning fast reflexes to win. Runs on any 32-bit Acorn Risc Machine with 2Mb of memory and RISC OS 2+.

FREE
rrp £30BINDER &
TWO FREE
MAGAZINES

Exclusive to Acorn User this binder will hold up to 13 issues of your favourite magazine. PLUS receive an extra two magazines absolutely FREE!



FREE

Subscription Hotline numbers

Tel: 0151-357 1275

Fax: 0151-357 2813

Email: database@dbdirect.demon.co.uk

Yes! I will subscribe...

1a There's never been a better time to subscribe so take advantage of one of these offers TODAY. See section 2

4234 ☐ UK £39.99 4202 ☐ EU £53.99 4203 ☐ World £68.99*

To renew subscription please tick:

4235 ☐ UK £39.99 4224 ☐ EU £53.99 4225 ☐ World £68.99*

*Unfortunately World subscribers are not eligible to receive the free gift/special offer

I wish to pay by: ☐ Cheque/postal order made payable to IDG Media
☐ Credit card (Visa/Access/Barclaycard/Mastercard/Eurocard/Connect)

Expiry date / Card No.

1b Please enrol me as a subscriber to Acorn User.

4210 ☐ with payments of £9.49 by continuous quarterly direct debit See section 2.

Your subscription will continue until you cancel. Over a year you will receive 13 issues.

Name of Bank/Building Society

Address

Name of Account

Your Account No. Sort Code

Date Signature(s)

Your instructions to the bank/building society:

Originator's ID No. 851412

I instruct you to pay direct debits from my account at the request of IDG Media. The amounts are variable and may be debited on various dates. No acknowledgement required. I understand that IDG Media may change the amounts and dates only after giving me prior notice. I will inform the bank/building society in writing if I wish to cancel this instruction. I understand that if any direct debit is paid which breaks the terms of the instruction, the bank/building society will make a refund. Bank/building society may decline to accept instructions to pay direct debit from some types of accounts.

2 Please send me the following FREE Gift/Special Offer (tick one):

4247 ☐ Rhapsody FREE 4705 ☐ Binder & 2 magazines FREE

4249 ☐ Crystal Maze FREE 4770 ☐ High RISC Racing FREE

4248 ☐ TextEase £20 4250 ☐ Personal Accounts 3 £10

3 Name (Mr/Mrs/Ms/Miss)

Address

Postcode Tel.

4 Now send your completed form and payment to Acorn User, Database Direct, FREEPOST, South Wirral L65 3EB. Tel: 0151-357 1275. Please state if credit card billing address is different from the delivery address. Photocopies or handwritten versions of the above information are acceptable.



Viewpoint

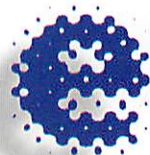
This issue of the magazine starts a series of features on Acorn and other major companies (as opposed to one or two-man bands) that produce Acorn software or hardware, this coincides with our features on companies that use RISC OS machines to help run their business.

Why would we do this?

Clearly there is a lack of optimism in the Acorn market and, with some people, a kind of desperation is setting in. But I find it hard to credit, two years ago even I believed that Acorn were not long for this world — but that was before all the changes.

In the first year of David Lee's leadership it was difficult to predict the future, there were just too many variables, even Acorn were very unsure about exactly where they were going — they just knew they had to go *somewhere* in order to survive. But the waters have settled and the future is very much clearer.

For a start, Acorn would now find it extremely hard to fail as a business. They are sufficiently well known as a leading-



Acorn, what's an Acorn?

A recent contribution, written by J B Robinson, laid emphasis on a problem that frustrates and infuriates many of the fortunate few who have realised Acorn is infinitely superior. Acorn's advertising policies are very limited within the confines of the Acorn press. Frequently, whenever the topic of computers is mentioned, I rant and rave about the Acorn, the StrongARM processor and so on.

But my words fall on stony ground. The PC world is simply not convinced that any Acorn machine is more than an Acorn Electron or something on the lines of a BBC Master! They do not see it as serious competition. The usual question is "What's an Acorn?" "Perhaps it is a new kind of Amstrad notepad, or perhaps it's one of the very first computers that could add numbers." One PC fan said, "Acorn — nice machine, only one problem — no one buys

them ... ha ha ha!"

I have never seen an advert on TV for the Risc PC, I have never seen the StrongARM processor announced to the world as the chip that beats the celebrated Intel Pentium processor all round. Everyone should have the chance to see an Acorn as it really is, few people are fortunate enough to know of them, many who do associate them with the Acorn 3000s that some schools install. It is a serious problem.

A machine with stunning capabilities is not receiving its due. I see the Acorn World as a little club where the fortunate few look down from their ivory tower to see an ocean of PCs crashing all about them — with a few island of Macs here and there. It's time everyone knew that Acorn exists.

William Simpson,
Lincoln

Easy scanning

As an amateur Acorn computer user I am always on the lookout for new and interesting ways of expanding my machine's capabilities. I have always been interested in getting a scanner but it's quite an expense so I was hesitant.

However when looking through an electronics magazine I came across something called Scanafax from Avro Pacific. It connects to the fax machine and modem but acts like a scanner, it sounded ideal although it claimed to only work with PCs and Macs, it only cost £35 so I took a chance.

The results are great, used in conjunction with ArcFax it will scan documents easily, I can certainly recommend it as a cheap alternative to the more expensive scanners if you don't need or want full colour and very high resolution.

M. G. Brett
West Sussex



edge technology company in the big bad world that it would take a master-stroke of bad planning to bring their success crashing down. It *could* happen but they would have to work hard at it.

Their new business of selling the technology — both hardware and software — that *you* helped them develop (make no mistake, if it were not for the end user Acorn would not be where it is today) is established; the contracts are there; the money is coming in and it will be a lot of money as the years roll past.

But what of the retail business? What of the desktop machines that we love to use? As long as Acorn continue to develop new technology they will continue to produce desktop machines. Why? Because it is a major element in their technology business. Acorn are able to go to their potential customers and say "this isn't vapourware, these are not just ideas. Look, here's a user base of thousands who live and breathe the technology in real, every day applications and environments" and the customers are impressed.

You are not going to be deserted and Acorn are not going to fail. But nothing

remains static in this world, we either have an increasing number of RISC OS users, or it's declining.

Then, even as one letter here shows, people persist in complaining that Acorn never advertise. Ignoring the fact, for a moment, that they have experimented here and there to check out response, it is almost a pointless activity.

What you see on TV is *corporate* advertising, not selling products but selling a company name be it Microsoft or Intel, or occasionally Apple. Acorn do not, yet, have money to burn on corporate advertising, and this sort of thing only works when you are already a household name.

However Acorn do not need it, because their customers are now quite likely to do the promotion for them, through the NetComputer and other deals. The new Acorn@Heart™ branding will help to do the job. While Acorn cannot, and will not, insist that a customer who builds a product which contains Acorn technology put the logo on the outside, most will and many already have agreed.

It may be subtle, but it will be pervasive. As more and more products get this brand-

ing, here and abroad — notably in the USA — people will start to come to Acorn for their desktop machines as well. Why should they? Application software. The same thing that drives PC users to buy PCs can drive NC users to buy Acorn, they run the same software.

It is possible to run NCs as standalones from Zip drives plugged into the parallel port so suddenly the potential market for RISC OS software multiplies by the thousand, if not millions, worldwide. There are several companies who are already checking to ensure their products can be made to function on the NC, because they see the future potential and want to make sure they're riding the first wave to financial success.

The ones who don't recognise this incredible opportunity will be stampeded in the rush from non-Acorn vendors who suddenly realise there are niches to be filled in a completely new market.

So, while I understand to a point, this doom and gloom it is no longer a necessity. Optimism is definitely the order of the day.

Steve Turnbull, Editor



Not quite right

Having read your review of our software *Games Suite* in the last issue of *Acorn User*, I believe a misunderstanding occurred in your reviewer's perception of the nature and purpose of the software. However at the same time a number of valid points were raised which we have since worked to correct.

All of the minor errors, such as the occasional Filer error, and the inconsistencies in the tutorial are already corrected. Over the past few weeks we have been carrying out major revision of the software, and are now ready to release v2.10, which addresses all the points and problems raised in the review, and also includes many more features.

A syntax checker now checks the application before your run it, and produces a written report highlighting most of the possible syntax problems such as misspellings and incorrect references before the game is

run. If an error still persists this is handled better at run time and a sensible error message is given.

The editing suite is also undergoing a major revision, with the inclusion of visual features, so walkpaths can be previewed as they are edited, animations viewed in the background through a film preview window, and the time lines now produce a graphic representation of the game's progress. These additional features aid the visualisation process of converting numbers to events that many people have problems with.

The suite has also been extended, with a 'rotational' objects editor, over twice as many key maps, a new resource editor, which simplifies and extends the process for writing introductions, provides more fonts, music and screen fading routines and is in general much more intuitive than the previous version.

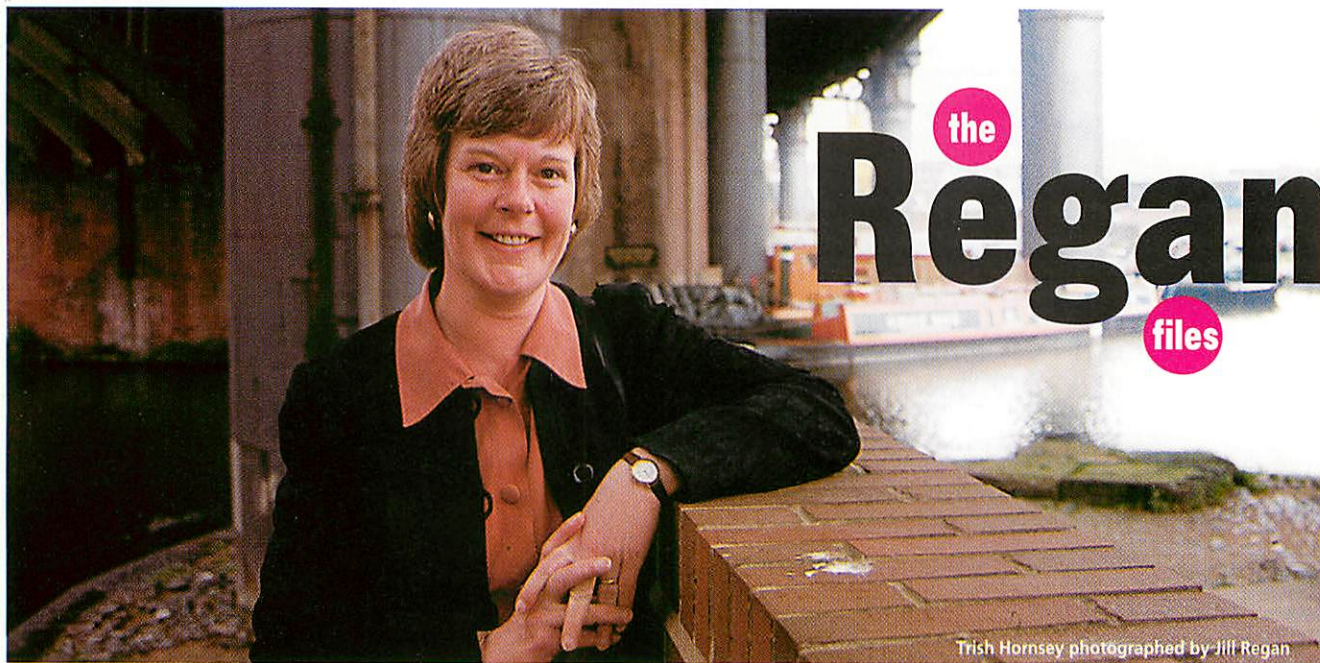
To clarify a few points that were not quite clear in the manual: Games Suite games can

be distributed and the runtime code is free-ware, so no fees need to be paid to Grasshopper. We are offering a software system for making installation discs and labelling them and so on, for £10. The sound support is provided in two methods, via the sampled voices as mentioned, but also through playback of individual voices from Tracker music formats, allowing an additional 32 sound effects.

Every copy of Games Suite is dispatched with a letter offering support and inviting feedback. We are willing to work with our users, and produce the kind of product that they want to see. The Games Suite is in constant development, and it is usually possible to incorporate requested features rapidly.

As with all our updates users can upgrade to v2.10 for free, either via e-mail or by sending an SAE. New manuals are available for £3.

**Ben Ollivere,
Grasshopper Software**



Trish Hornsey photographed by Jill Regan

the Regan files

Castlefield, Manchester. Places like this are at the heart of the North's rejuvenation and – if everything goes to plan – soon will be at the heart of special needs education solutions for the rest of the country.

I'm in the crazy atmosphere of the development suite of games company Ocean. I am not here to play games. I am here to meet Trish Hornsey, the development director of Inclusive Technology (IT): a division of Ocean set up last October and run by people who used to be leading lights at SEMERC. Ocean itself is one of the biggest computer games companies in the UK – in fact, it once did games for the BBC Micro, though nothing for the Arc. So, what's a team of special-needs education experts doing here?

'I think being part of a bigger company will pay off; for instance we could not have set Inclusive up without good financial help,' explains Trish. 'We knew the financial director at Ocean professionally before. What is good for us is that Ocean believes we can make it happen.'

'It is a bit of a contrast. Computer games are a very high risk business; huge investment, and if it works huge pay off. Educational software is somewhat more stable. Ocean believes that home links are going to become stronger and stronger as time goes on. At the moment we work alongside each other but who knows what the future holds? I am sure their programmers have huge chunks of code that they just throw away that would be useful to us. We are already beginning to tap into the graphics side.'

Inclusive's philosophy is to sell schools good quality software. Their focus is – as their name implies – to include children with special-needs in the National Curriculum. For IT's commitment to this you only have look at their Web site, (<http://www.inclusive.co.uk>) which

goes far beyond a catalogue on-line; it's more of a special-needs information service.

Trish was once a would-be doctor and did one year at medical school before changing to do psychology and then becoming a teacher in a special school.

'It was one child. In special-needs and IT you will usually find that it is one child which starts people off. I was working in an assessment nursery in a special school. I was presented with a three year old boy who had athetoid cerebral palsy, which meant he was extremely physically handicapped. He could move nothing except his head and eyes.

'He was very, very bright. At three he was toilet trained; he could not speak, so if he wanted the toilet he would look down at himself and moan. If you missed the cue

**Computer games
are a very high
risk business;
huge investment,
and if it works
huge pay off.
Educational
software is
somewhat more
stable**

and he wet himself he would get very distressed. I knew there was something going on upstairs and I wanted to find a way of tapping it.

'We had some computers in school and I spent the next six months as it turned out trying to re-invent several wheels. Then I discovered that the Spastics Society (now Scope) ran a course looking at computers

and special-needs. That was a real eye opener. I discovered that a lot of the things I wanted not only already existed but were freely available.

'I got the software and spent a lot of time making switches the boy could use. By the time he was six he could string together sentences on a word-processor. It was great and it got me hooked.

Trish's job as development director means she is responsible for all the products Inclusive do. If they publish or buy in from other places it is her responsibility to select it. If it is an in-house product then she runs a team to draw up a spec. At the end of the day it's her job to make it all work. No easy task.

'We have a few dilemmas. The educational software industry is in quite a difficult position at the moment. We want high-quality resources for UK kids, for the UK curriculum.

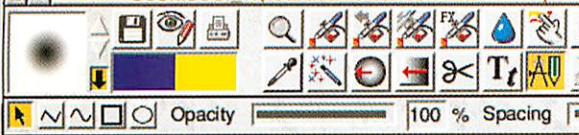
'There are companies, big ones like Microsoft, who are now selling their software in the UK. They are beginning to take it further by versioning it with UK English and changing it to fit in with our curriculum.

'This is a big danger, because these companies are so big they can invest huge amounts of money. They have a world market and versioning is less costly than development.

'There are a number of ways we are trying to tackle this problem. One is that we are working with an American partner to tailor its software for our schools and to work on joint developments with them, so that we can bring things out simultaneously, which will work for our children. Hopefully working together will bring us revenue from the vast US market which will help the kids here.'

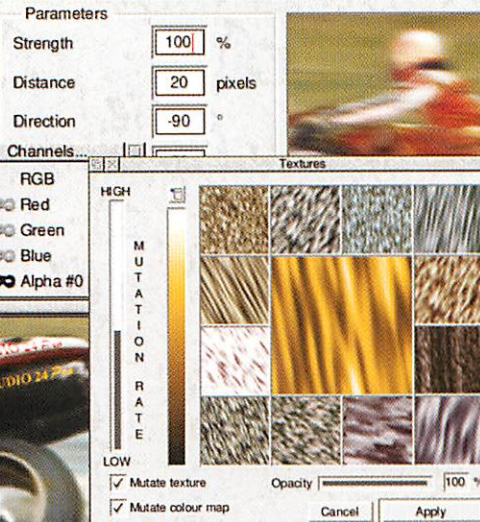
It may not be a pure home-grown solution, but at least it will be Trish and not Bill Gates making the decisions.

Jill Regan **AU**



Studio24 was hailed as one of the best 24 bit painting programs. A completely new program, Studio24Pro is now set to lead the field in painting & photo-retouching

Picture produced by Walter Briggs, Kinfisher Graphics using Studio24Pro



'Many Acorn user front covers have been created from scratch using this program alone, concrete proof of the power of this creative tool'. - Acorn User March 96

Studio24Pro

£146.87 inc vat

Special Offer!
Studio24 v1 £35.00



The Casio QV10a and the high resolution QV100 Digital Cameras are now available for Acorn Computers. They are supplied complete with all cables and software. Store up to 96 images. Software and cables only price:- £116.33

Removable Harddrive System

Total Data Security & Harddisc Backup

The removable harddrive system fits into a 5 1/4" drive slot in the RiscPC and harddrives are available in many sizes which can simply plug in and out of the slot as required. The drive may be locked in place to prevent unauthorized removal. For total security the drive may be removed and stored in a safe place to prevent unauthorized access to your data. Because the removable drives are available in any size (up to

at least 4Gb) they are also ideal for use as backups for existing drives, and may be transported between different computers.



PLC/3 £104.57



AVK/3 £325.00

!NEW! A new model, the AVK/5 is similar to the AVK/3 but has the added feature of remote mouse operation using the infra red hand held remote control. This enables lectures and demonstrations to be done without having to sit at the computer keyboard.

AVK/5 £425.00

ArtWorks Video Tutorial

Walter Briggs is the tutor for this 1 hour video which shows how to use all the ArtWorks tools and then goes on to show how Walter produced his famous Tiger head picture. Walter also draws an impressive landscape picture which can be copied by those with no artistic talent at all!

ArtWorks Video Tutorial £19.99



24 Bit Colour Scanners

!NEW! NEW Scanners now available! We can now offer the popular Umax Vista S6E colour scanner at just £269.00 including vat and Acorn software. Drivers are also now available for the Microtek Scanmaker and AGFA Snapscan scanners.

These new scanners do require a SCSI card though, so the faithful Epson GT5000 parallel port version can't be discounted yet! Imagemaster and Twain software are included in the price of all scanners, but we also offer our Studio24Pro Photo re-touching software at just £80.00 inc vat with every scanner purchase.

Internet & World Wide Web

For all our latest prices and news of new products try our Web Site:-

Jet Media Labs 33,600 ext £89.00
US Robotics Voice Modem £189.00
ANT Internet Suite Software £116.32

<http://www.pineapple.demon.co.uk>

20 : 20 Finance available on all RiscPC's

Studio24 v1 FREE with any RiscPC purchase

FREE membership of the Virus Protection Scheme with any RiscPC

Studio24Pro at just £49.00 with any RiscPC purchase

Try our 'Choose your own RiscPC' deal and save money

Pineapple Software have moved!
Come and visit us in our new showroom
Easy Parking

352 Green Lane, Ilford
Essex IG3 9JS

Tel 0181 599 1476 Fax 0181 598 2343
email:- sales@pineapple.demon.co.uk

Terms:- All prices include 17.5% vat. Carriage £15.00 on computer systems. £5.88 on all other hardware. Other items free. Phone for quote outside U.K. Official orders, cheques and all major credit cards accepted at no extra charge.

Virus Protection

The Pineapple Virus Protection Scheme will allow you to detect and remove over 100 viruses from your Acorn computer.

£28.20 one year subscription

'If you're interested in virus protection, join the Pineapple virus protection scheme and buy Killer. Accept no alternatives.' - Acorn User Feb 96



Multimedia Speakers

Yamaha 10 Watt YST-M15 £63.00

A4 Colour Scanners

Primax Flatbed A4 (1 only) £199
Epson GT5000 (parallel) £399
Epson GT5000 (SCSI) £469
Epson GT8500 £529
Epson GT9500 £679
Microtek E3 (SCSI) £325
Microtek E6 (SCSI) £365
Agfa Snapscan (SCSI) £359
Umax Vista S6E (SCSI) £269
All scanners include Imagemaster & Twain. Studio24Pro at just £80.00

A7000 Computers

4Mb HD540 14" Mon £1099
4Mb HD540 CD 14" Mon £1199

StrongARM RiscPC

4Mb HD1Gb No Mon £1139
4Mb HD1Gb8CD No Mon £1189
10Mb HD1Gb No Mon £1439
10Mb HD1Gb8CD No Mon £1489

RiscPC monitors

Acorn 14" SVGA monitor £264
Acorn 17" SVGA monitor (.25) £640
Acorn 17" SVGA monitor (.28) £423

PC Cards/StrongARM

	Separately	with RiscPC
DX2-66 Card	£289.00	£169.00
DX4-100 Card	£349.00	£229.00
586-100 Card	£468.83	£351.33
StrongARM	£279.00	£116.32

RiscPC Upgrades

x8 CDROM (RiscOS 3.6/3.7) £89.00
Second Slice (large PSU) £116.33
Second Slice - no PSU £89.00
RiscOS 3.6 upgrade £49.95

Memory Upgrades

	Phone for latest SIMM prices !!
1Mb Vram (Simtec)	£80.00
2Mb Vram (Simtec)	£115.00
4Mb SIMM Ram	£19.00
8Mb SIMM Ram	£39.00
16Mb SIMM Ram	£69.00
32Mb SIMM Ram	£135.00

members when purchasing any RiscPC. (You can join the clan for just £15). Trade-in a PC compatible, Atari, Amiga or Acorn computer (including BBC), and deduct £200 from the prices shown above.

'Pineapple offer some of the finest and friendliest after-sales support you will find' - Acorn User Mar 96

Why not come and visit us (easy parking) where you can see most of the Acorn range of computers and other hardware in action.

Monday - Saturday 0900 - 1730



All our prices INCLUDE 17.5% vat

Printers

Hewlett Packard
Laserjet 5L 4ppm £399.00
Deskjet 690 colour £269.00
Deskjet 870 colour £399.00

Canon
BJC620 col 720dpi £315.00
BJC4200 col 720dpi £249.00
BJC240 colour £199.00
BJC4550 A3 Colour £399.00

Epson
Stylus Colour 600 £299.00
Stylus Colour IIS £199.00
Stylus Pro XL+ (A3) £999.00

3.5" Bare Harddrives

540Mb IDE	£99.00
850Mb IDE	£119.00
1.2Gb IDE	£155.00
2.0Gb IDE	£229.00
3.2Gb IDE	£285.00
1.2Gb SCSI	£195.00
2.0Gb SCSI	£295.00
3.2Gb SCSI	£329.00
4.2Gb SCSI	£635.00

Removable Harddrives

IDE Mounting Kit	£15.00
IDE Removable Case	£10.00
SCSI Mounting Kit	£19.00
SCSI Removable Case	£10.00
External Mounting Box	£89.00

SCSI Systems

SCSI Card	£116.32
SCSI Internal Cable	£9.99
SCSI External Cable	£19.99
SCSI II Card	£189.00
SCSI II Internal Cable	£9.99
SCSI II External Cable	£22.32

Monitors

14" CTX 1024x768	£189.00
15" CTX 1280x1024	£279.00
17" CTX 1280x1024	£449.00
17" CTX 1600x1200	£579.00
20" 82Khz SVGA	£1115.00

Ilyama Visionmaster
17" 0.26mm MF8617E £599.00
17" 0.25mm MF9017E £669.00

Acorn
14" AKF53 Multiscan £265.00

!NEW Computer
Trade in deals!

!! £200 trade-in when you buy any new computer!!

This offer is open to any Clan members when purchasing any RiscPC. (You can join the clan for just £15). Trade-in a PC compatible, Atari, Amiga or Acorn computer (including BBC), and deduct £200 from the prices shown above.

Completing The Jigsaw



Puzzled by the complexities of networking?

Atomwide can help you out. From a two workstation peer to peer network, to a very large site comprising hundreds of network points.

Atomwide have been designing and building networks for many years now. We can help you every step of the way, to ensure that your network is assembled correctly right up to the last piece in the jigsaw.

All Atomwide networks are designed to IEEE802.3 specifications giving you the choice of using both Acorn and other industry standard equipment. All installations, software training, and aftersales hotline support are carried out by our fully qualified team of experts.

Contact us now for a network quotation designed to meet your specific requirements.

ATOMWIDE

7 The Metro Centre, Bridge Road, Orpington, Kent, BR5 2BE.
Tel 01689 814500 Fax 01689 814501 Email: sales@atomwide.co.uk
<http://www.ant.co.uk/com/atomwide.html> FTP: <ftp://ftp.ant.co.uk/>